

APPENDIX E

WETLANDS DELINEATION - SITES 4 AND 5

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1990

Wetland Delineation for
Naval Weapon Station Earle, Colt's Neck, New Jersey
July 3, 1997

Prepared by:
Brown and Root Environmental
Aiken, South Carolina

1970-1971
1971-1972
1972-1973

1973-1974
1974-1975
1975-1976

Introduction

On June 23, 1997, Robert Abernethy (Brown and Root Environmental) delineated wetlands on Sites 4 and 5 at Naval Weapon Station Earle, Colt's Neck, New Jersey. The purpose of the delineation was to survey both sites and the surrounding woodland for the presence of wetlands. Wetlands that were located were delineated with blaze orange flagging that was hung from trees. Each flag was coded with the site number followed by the letters "WL", a sample point number and a letter to identify the individual wetland. For example 04 WL 01 A would be Site 4 wetland flag, point 1 of wetland A.

This delineation was performed according to procedures outlined in the U.S. Army Corps of Engineers Wetland Delineation Manual (1987). All delineations were routine and consisted of an onsite inspection of the vegetation, soils and hydrology.

Site 04 - Landfill West of "D" Group

General Description of the landfill

The landfill is located on the top of a small hill. Pitch pine (*Pinus rigida*) is the dominant tree species with individuals in rows and at consistent spacing indicative of a plantation. The soils are classified as Urdothents or a sand pit and are surrounded by soils classified as Atsion sand.

Wetland A (04 WL 01 A - 04 WL 19 A)

Wetland A is located southeast of the landfill adjacent to the toe of the landfill. This wetland drains to the east and surface waters of this wetland were previously sampled at 04SW02 (see Figure 7-1). Red maple (*Acer rubrum*) is the dominant tree species with a few black gum (*Nyssa sylvatica*) and sassafras (*Sassafrass albidum*) also present. Dominant understory plants included blueberry (*Vaccinium* sp., wax myrtle (*Myrica cerifera*) and *Phragmites australis*. Ground cover in much of the wetland is absent due to shading. Where present, the ground cover is limited to small blueberry bushes and poison ivy (*Toxicodendron radicans*).

The soil is classified as Atsion sand which is listed as a hydric soil on the hydric soils list for Monmouth County NJ. The soil was a gleyed sand under 1 - 6 inches of black organic muck. Saturated soil conditions were encountered at a depth of 6 inches in some pits and at the surface in others.

This small wetland drains much of the landfill. Spoil and debris from the landfill (barrels, telephone poles etc) formed the upland boundary of the north edge of the wetland.

Wetland B (04 WL 01 B - 04 WL 10 B)

Wetland B is also located southeast of the landfill and separated from wetland A by an upland sand ridge. This upland sand ridge is dominated by chestnut oak (*Quercus prinus*), blackjack oak (*Q. marilandica*) and sassafras with a few pitch pines. The New Jersey Department of Environmental Protection (NJDEP) maps show this upland as a wetland. This discrepancy may be attributable to a mapping methodology which may have relied heavily on the interpretation of aerial photography as opposed to extensive field surveys.

Surface water sample point 04SW01 was taken from this wetland and a wetland sample point was also taken at the same location. Like Wetland A, the dominant tree species was black gum and red maple with an understory of blueberry. However, unlike Wetland A, Wetland B has a dense groundcover of Sphagnum moss over extremely liquid sediments. Soils and hydrology are similar to Wetland A.

Small depression area in the landfill (04 WL 01 C)

A small depression area (less than a quarter acre) was located in the center of the landfill. This area collects surface runoff and channels it through an old ditch (2 feet wide and 1 foot deep) to the south and into Wetland A. This depression appears to be a wetland dominated by *Phragmites* and having a single black willow (*Salix nigra*) in the center. However, a hole was excavated at the lowest area adjacent to the willow and no saturation, gleyed soils, or bright mottles were noted to a depth of 30 inches. While the vegetation was indicative of a wetland, the soils and the hydrology were not. This area was not classified as a wetland because it failed to fulfill all three of the necessary criteria

Wetland surrounding Lake Earle north of Site 4

The area southwest of Lake Earle was identified as a wetland on NJDEP maps. A field inspection revealed that like the sand ridge located south of the land fill, this area had been mapped incorrectly. This area was dominated by hardwoods that may have resulted in the incorrect photo-interpretation. Red maple and sweetgum (*Liquidambar styraciflua*) adjacent to the lake graded into chestnut oaks and pitch pines as the elevation increased. The wetland adjacent to the lake is limited to a fringe of no greater than 10 to 15 feet in width and dominated by sweetgum, wax myrtle, and blueberry.

Conclusion

There are no wetlands located within the confines of the Site 4 landfill. However, a small wetland is located south of the landfill and immediately adjacent to it. This wetland (Wetland A) contains barrels and some debris from the landfill along one edge. This area could be impacted by remediation activities.

Site 05 - Landfill west of army barricades

General description

The landfill is located in a relatively flat area dominated by planted pitch pines (Figure 8-1). The surface of the landfill is somewhat irregular and drainage flows off the skeet range to the south and west eventually collecting in a small depression area (05 WL 01 A). The soils are classified as Lakewood sand.

Depression Area in Landfill (05 WL 01 A)

Much of the landfill drains into a small depression southwest of the skeet range. This area is dominated by *Phragmites*, *Juncus* sp. and *Panicum* sp. Vegetation indicated that this area was a wetland and a hole was excavated in the lowest portion to a depth of 30 inches. The soils in this area appear to contain more clay and less sand than other areas. Saturated conditions were encountered at 14 inches but no water was noted in the bottom of the hole after 1 hour. The soil did contain mottles below 12 inches however the chroma of the matrix was above 2. The area probably held water throughout the winter and into the early spring, but the area did not meet the soils and hydrology criteria to be classified as a wetland.

Wetland B (05 WL 01 B - 05 WL 17 B)

This wetland area is located southwest of the landfill between a dirt road and the railroad. The area southwest of the railroad drains under the railroad grade by way of a culvert and skirts the

wetland area through a ditch. Wetland B is characterized by a canopy of pitch pine and red maple and an understory of red maple and blueberry. The soils were mapped as a Keyport sandy loam which contains hydric conditions in swales and depressions. There was a 6 inch layer of black organic muck over gleyed sand in the wetland. There was no evidence of saturation to a depth of 20 inches, however the presence of black stained leaves and mosses growing at the base of trees, indicated that water had collected in the area for an extended period of time. This area was classified as a wetland.

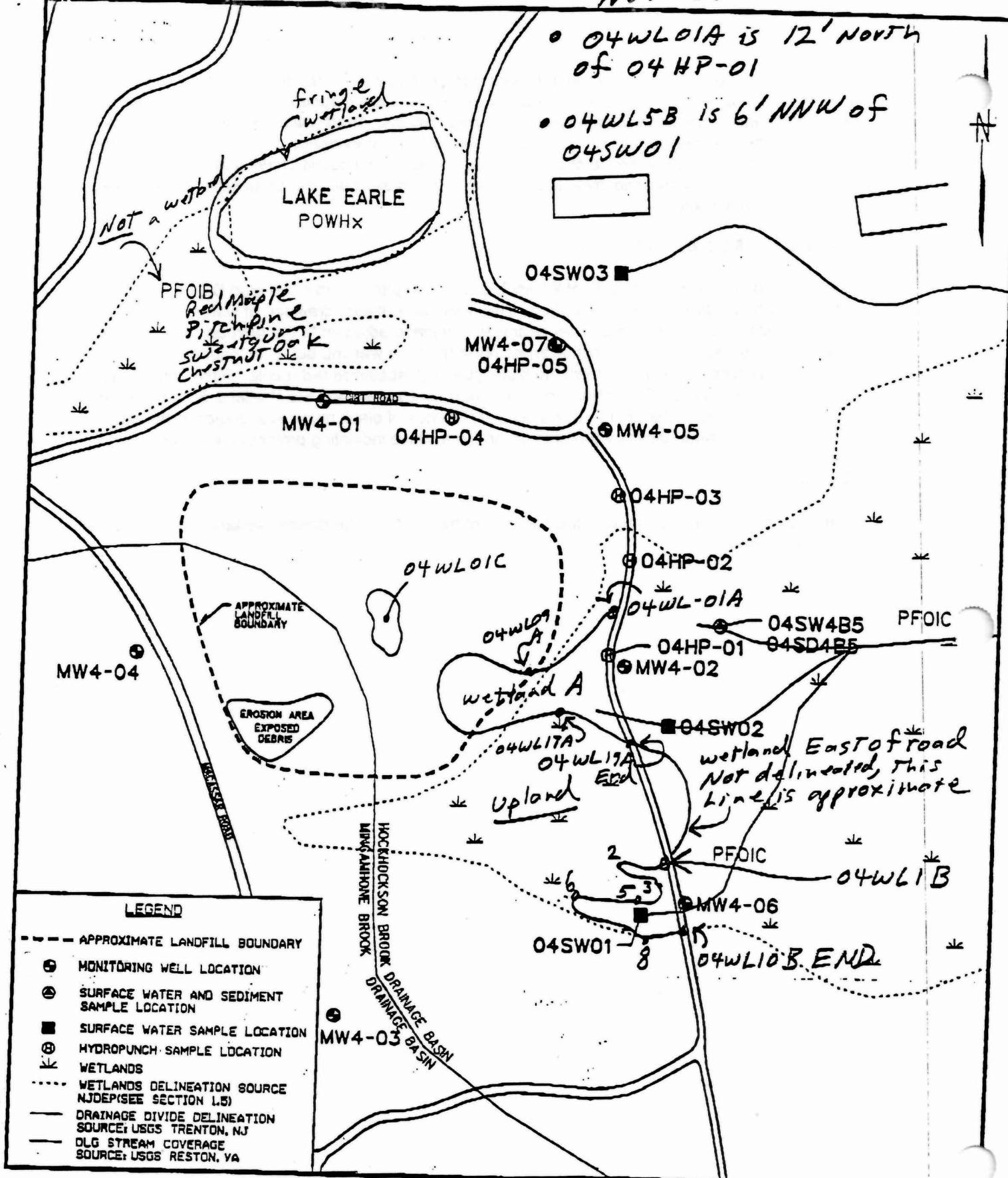
Wetland C (05 WL 01 C - 05 WL 04 C)

This wetland area is located north of Wetland B and is separated from Wetland B by a ditch and associated spoil bank that acts as a dam. This spoil bank diverts drainage of water from Wetland C and directs it southwest into a small depression wetland adjacent to the railroad. A small (1 foot wide, 6 inches deep) drainage ditch extends north from the wetland but is no longer functional. Dominant species in the wetland include black gum with scattered red maple. Pitch pine grows adjacent to the wetland. Soils consisted of Keyport sandy loam and like Wetland B, this area was dry to 20 inches. Like Wetland B, this area had 6 inches of black muck over gleyed sand and blackened and stained leaves were present on the surface indicating prolonged flooding.

Conclusion

Site 5 contains no wetlands within the confines of the landfill. The closest wetland is over 200 feet to the southwest.

Field Notes, June 23 1997



SAMPLE LOCATIONS
SITE 4 - LANDFILL WEST OF 'D' GROUP

0 200 400
SCALE IN FEET

FIGURE 7-1**Brown & Root Environmental**

DATA FORM I WETLAND DETERMINATION

Applicant
Name: NWS EARLEApplication
Number: _____Project
Name: _____State: N.J. County: Monmouth Legal Description: Township: _____ Range: _____
Date: 6/22/97 Plot No.: 04 TP 24 Section: _____Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. None		7. Phragmites Fac C	
2.		8. Juncos Fac Fac C or OBL	
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. Wax myrtle	FAC	10.	
5. Red maple	FAC	11. None	
6. Sweetgum	FAC	12.	
% of species that are OBL, FACW, and/or FAC: 100% Other indicators: _____			
Hydrophytic vegetation: Yes <input checked="" type="checkbox"/> No _____ Basis: _____			

SoilSeries and phase: *Astion Sand* On hydric soils list? Yes No _____Mottled: Yes _____; No Mottle color: _____; Matrix color: _____Gleyed: Yes No _____ Other indicators: _____Hydric soils: Yes No _____ Basis: _____*4 inches of organic muck on top of Gleyed Sand**water in hole at 5 inches*HydrologyInundated: Yes _____ No Depth of standing water: _____Saturated soils: Yes No _____ Depth to saturated soil: *1/2 inch*

Other indicators: _____

Wetland hydrology: Yes No _____ Basis: *All 3 parameters met*Atypical situation: Yes _____ No *Saturated soil at 1 inch*Normal Circumstances?: Yes No _____Wetland Determination: Wetland Nonwetland _____Comments: *Point taken 18 feet NNE of 04 TP 24*
This point is in the wetland and west of Point
*Determined by: Robert Abernethy 04 HP-01**This point is in
wetland A*

DATA FORM 1

WETLAND DETERMINATION

Applicant
Name: NWS EARLE

Application
Number: _____

Project
Name: _____

State: N.J. County: Monmouth Legal Description: _____ Township: _____ Range: _____

Date: June 22 97 Plot No.: 04 WL 07 A Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. <u>Red Maple</u>	<u>FAC</u>	7. <u>Phragmites</u>	<u>FAC</u>
2. <u>Acer rubrum</u>		8.	
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. <u>Vaccinium</u>		10. <u>Poison Ivy</u>	<u>FAC</u>
5.		11.	
6.		12.	

% of species that are OBL, FACW, and/or FAC: 100% Other indicators: _____

Hydrophytic vegetation: Yes No _____ Basis: _____

Soil

Series and phase: Atsion Sand On hydric soils list? Yes No _____

Mottled: Yes _____; No Mottle color: _____; Matrix color: _____

Gleyed: Yes No _____. Other indicators: 1-2 inches Black muck over Gleyed Sand

Hydric soils: Yes No _____; Basis: Black organic muck over Gleyed Sand indicates wetland soil

Hydrology

Inundated: Yes _____ No Depth of standing water: _____

Saturated soils: Yes No _____ Depth to saturated soil: 3 inches

Other indicators: _____

Wetland hydrology: Yes No _____ Basis: Saturated Soil at 3 inches

Atypical situation: Yes _____ No

Normal Circumstances?: Yes No _____

Wetland Determination: Wetland Nonwetland _____

Comments:

DVLV

Determined by: Robert Abernethy

DATA FORM 1 WETLAND DETERMINATION

Applicant Name: NWS EARLE Application Number: _____ Project Name: _____
 State: N.J. County: Middlesex Legal Description: _____ Township: _____ Range: _____
 Date: 6-22-97 Plot No.: 04 WL 17 A Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. Chestnut oak ^{<i>Q. prinus</i>} upland		7. Vaccinium	
2. Sassafrass	FACW	8.	
3. Black Black Jack Oak ^{<i>Q. velutina</i>} upland		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. Vaccinium		10. None	
5.		11.	
6.		12. ^{of 0%}	

% of species that are OBL, FACW, and/or FAC: 0% Other indicators: _____

Hydrophytic vegetation: Yes No ✓ Basis: No wetland plants

Soil

ATsion Sand

But only inclusions

Series and phase:

On hydric soils list? Yes ✓ No

Mottled: Yes ; No ✓. Mottle color: _____; Matrix color: _____

Gleyed: Yes No ✓. Other indicators: No black muck. Just humus

Hydric soils: Yes ; No ✓; Basis: 1 inch of leaf mold over sand

Hydrology

Inundated: Yes No ✓ Depth of standing water: _____

Saturated soils: Yes ; No ✓. Depth to saturated soil: Dry white sand to 2 feet

Other indicators: _____

Wetland hydrology: Yes ; No ✓. Basis: No saturation

Atypical situation: Yes ; No ✓. Dry to 2 feet down

Normal Circumstances?: Yes ✓ No .

Wetland Determination: Wetland ; Nonwetland ✓

Comments:

Hole was dug 10 feet south of flag
2 feet higher in elevation
Determined by: Robert Abernethy

This sheet is typical of the ~~south~~ upland
Area south of the landfill

DATA FORM I

WETLAND DETERMINATION

Applicant
Name: NWS EARLE

Application
Number: _____

Project
Name: _____

State: N. J. County: Monmouth Legal Description: _____ Township: _____ Range: _____
Date: June 23/97 Plot No.: 04 SW 01 Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. <u>Bud Maple</u>	<u>FAC</u>	7. <u>Sphagnum Moss</u>	
2. <u>Black Gum</u>	<u>FAC</u>	8.	
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. <u>Vaccinium sp</u>		10. <u>No vine</u>	
5.		11.	
6.		12.	
% of species that are OBL, FACW, and/or FAC: <u>100%</u> Other indicators: _____			
Hydrophytic vegetation: Yes <input checked="" type="checkbox"/> No _____ Basis: <u>> 50%</u>			

Soil

Series and phase: Atsion Sand On hydric soils list? Yes No _____
 Mottled: Yes _____; No Mottle color: _____; Matrix color: _____
 Gleyed: Yes No _____ Other indicators: inch of Black muck over Gleyed Soil
 Hydric soils: Yes No _____ Basis: Sand ↑

Hydrology

Inundated: Yes No _____ Depth of standing water: 0 → 2 inches
 Saturated soils: Yes No _____ Depth to saturated soil: at surface

Other indicators: _____

Wetland hydrology: Yes No _____ Basis: saturation at surface

Atypical situation: Yes _____; No

Normal Circumstances?: Yes No _____

Wetland Determination: Wetland Nonwetland _____

Comments:

wetland B

Point was at 04 SW 01
 which is 6' SSE of all
 the wetland line from
 04 W C 58

Determined by: Robert Abernethy

DATA FORM I WETLAND DETERMINATION

Applicant Name: NWS EARLE Application Number: _____ Project Name: _____
 State: N. J. County: Monmouth Legal Description: _____ Township: _____ Range: _____
 Date: July 23 1997 Plot No.: 04 WL01 C Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

Species	Indicator Status	Species	Indicator Status
<u>Trees</u>		<u>Herbs</u>	
1. <u>Black willow (1)</u>	<u>OBL</u>	7. <u>Phragmites australis</u> FACW	
2. <u>Salix nigra</u>		8.	
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. <u>None</u>		10. <u>None</u>	
5.		11.	
6.		12.	

% of species that are OBL, FACW, and/or FAC: 100% Other indicators: _____

Hydrophytic vegetation: Yes No _____ Basis: > 50% Fac

Soil

Series and phase: udorthents (landfill) On hydric soils list? Yes _____ No

Mottled: Yes _____; No Mottle color: _____; Matrix color: _____

Gleyed: Yes _____ No Other indicators: _____

Hydric soils: Yes _____ No Basis: no mottles or other indications of Hydric conditions

Hydrology

Inundated: Yes _____ No Depth of standing water: _____

Saturated soils: Yes _____ No Depth to saturated soil: went to 30 inches no saturation

Other indicators: _____

Wetland hydrology: Yes _____ No Basis: _____

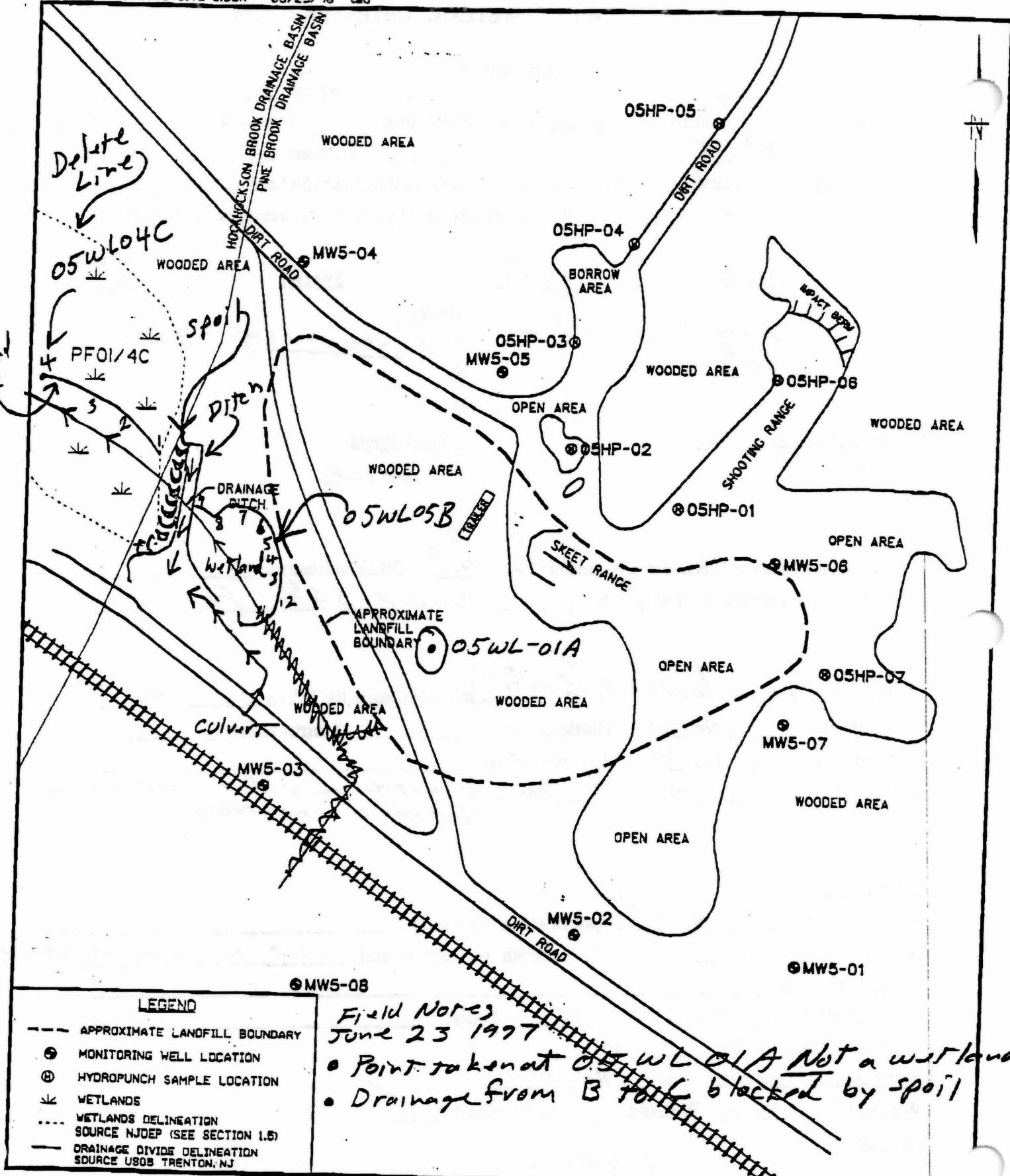
Atypical situation: Yes No _____

Normal Circumstances?: Yes _____ No

Wetland Determination: Wetland _____; Nonwetland

Comments: over

Determined by: Robert Abernethy



SAMPLE LOCATIONS

SITE 5 - LANDFILL WEST OF ARMY BARRICADES

FIGURE 8-1

0 150 300
SCALE IN FEET

SCALE IN FEET

Brown & Root Environmental

DATA FORM I WETLAND DETERMINATION

Applicant
Name: NWS EARLEApplication
Number: _____Project
Name: _____State: N.J. County: Monmouth Legal Description: _____ Township: _____ Range: _____
Date: June 23 97 Plot No.: 05 w 601 A Section: _____Vegetation [list the three dominant species in each vegetation layer (S if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>			
1. <u>None</u>		7. <u>Phragmites</u>	<u>FACW</u>
2. <u>A few surrounded</u>		8. <u>Cyperus</u>	
3. <u>by Pitch & White Pine</u>		9. <u>paniuscum</u>	
<u>Saplings/shrubs</u>			
4. <u>Blackberry</u>		<u>Woody vines</u>	
5.		10.	
6.		11. <u>None</u>	
% of species that are OBL, FACW, and/or FAC: <u>100%</u> Other indicators: _____			
Hydrophytic vegetation: Yes <input checked="" type="checkbox"/> No _____ Basis: <u>> 50 %</u>			

SoilSeries and phase: Lakewood Sand

On hydric soils list? Yes _____ No _____

Mottled: Yes ; No _____. Mottle color: 10 YR 5/8; Matrix color: 10 YR 5/3Gleyed: Yes _____. No Other indicators: _____Hydric soils: Yes ; No Basis: MOTTLES at 12 inches and belowMatrix color above 2 and below 10 inchesHydrologyInundated: Yes _____. No Depth of standing water: _____Saturated soils: Yes ; No _____. Depth to saturated soil: 14 inches

Other indicators: _____

Wetland hydrology: Yes _____. No Basis: _____Atypical situation: Yes ; No _____. Basis: _____Normal Circumstances?: Yes _____. No Basis: _____Wetland Determination: Wetland _____. Nonwetland Comments: *over*Determined by: Robert Abernethy

DATA FORM 1 WETLAND DETERMINATION

Applicant
Name: NWS EARLE Application Number: _____ Project Name: _____
 State: N. J. County: Monmouth Legal Description: _____ Township: _____ Range: _____
 Date: 6/23/97 Plot No.: 05 WL-01 B Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

Species	Indicator Status	Species	Indicator Status
<u>Trees</u>		<u>Herbs</u>	
1. <u>pitch pine</u>	<u>FACW</u>	7.	
2. <u>Red maple</u>	<u>FAC</u>	8.	<u>wood</u>
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. <u>Red maple</u>	<u>FAC</u>	10. <u>wood</u>	
5. <u>Vaccinium</u>		11.	
6.		12.	

% of species that are OBL, FACW, and/or FAC: 75% Other indicators: _____

Hydrophytic vegetation: Yes No _____ Basis: > 50% Fac

Soil

Keyport Sandy Loam
Gleyed Sand

Series and phase:

On hydric soils list? Yes No _____

Mottled: Yes _____; No Mottle color: _____; Matrix color: _____

Gleyed: Yes No _____ Other indicators: _____

Hydric soils: Yes No _____; Basis: There is 6" of Black Muck on Top of Gleyed Sand

Hydrology

Inundated: Yes _____ No Depth of standing water: _____

Saturated soils: Yes _____ No Depth to saturated soil: None to 20 inches

Other indicators: Black stained leaves and moss at base of all maple

Wetland hydrology: Yes No _____ Basis: indicate higher water table and

Atypical situation: Yes _____ No standing water in early spring

Normal Circumstances?: Yes No _____

Wetland Determination: Wetland Nonwetland _____

Comments: Point is in middle of wetland

I mapped the edge

Determined by: Robert Abernethy

DATA FORM 1 WETLAND DETERMINATION

Applicant
Name: NWS EARLEApplication
Number: _____Project
Name: _____

State: N.J. County: Monmouth Legal Description: _____

Township: _____ Range: _____

Date: 6/23/97 Plot No.: 05 w204 C

Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)].

Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. Black Gum	FAC	7.	
2.		8. None	
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. Vaccinium		10. Smilax	
5.		11.	
6.		12.	
% of species that are OBL, FACW, and/or FAC: 100 %		Other indicators:	
Hydrophytic vegetation: Yes <input checked="" type="checkbox"/> No _____		Basis: > 50 %	

Soil

Series and phase: Keyport Sandy Ation loam

On hydric soils list? Yes No _____Mottled: Yes _____; No Mottle color: _____; Matrix color: _____Gleyed: Yes No _____ Other indicators: 6" or more Gleyed SandHydric soils: Yes No _____ Basis:HydrologyInundated: Yes _____ No Depth of standing water: _____Saturated soils: Yes _____ No Depth to saturated soil: _____

Other indicators: Blackened stained leaves indicate flooding

Wetland hydrology: Yes No _____ Basis: _____Atypical situation: Yes No Normal Circumstances?: Yes No _____Wetland Determination: Wetland Nonwetland _____

Comments: over

Determined by: Robert Abernethy

“COLD-SPRING HARBOR”

“COLD-SPRING HARBOR”
is a name which has been applied to
the village of Cold Spring Harbor,
Long Island, New York.

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the village of Cold Spring Harbor,
Long Island, New York.

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is a name which has been applied to
the village of Cold Spring Harbor,
Long Island, New York.

GEOTECHNICAL BORING LOGS - SITE 5

APPENDIX F

WILSONS DRIFTWOOD 100%

100%



BORING LOG

Page 1 of 1

PROJECT NAME:
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

NWS - EARLE
GTO - 289
JCA - Drilling
CME - 55

BORING NUMBER: 05-6B-01
DATE: 6-18-97
GEOLOGIST: PAUL DAVIS
DRILLER: Steve Burger / Jon Urban

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S •	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
S-1	0.0	1/2		very loose	Orb. brn		Silty fine grained soil		Dry				
1250	2.0	4/6	16/24	med dense			Sand						
S-2	3.0	6/9											
1253	4.0	9/7	17/24		dark brown		Silty clayey F.G. sand (charred wood pieces)	SC	moist				
S-3	5.0	6/9					(wood)		wet				
1254	6.0	100-	14/18				(paper, metal straps)						
S-4	7.0	7/8		med. dense			(paper, Tintail)		landfill odors				
1307	8.0	8/10	18/24										
S-5	9.0	7/9					(Tintail)		wet				
1316	10.0	8/7	12/24				(charred wood)		landfill odors				
S-6	11	4/5		loose					NO Recovery				
1321	12	5/6	0/24	med. dense					NO Recovery				
S-7	13	12/11					Silty clayey fine grained sand	SC					
1330	14	10/10	2/24										
S-8	15	5/5					(charred wood)		landfill odors				
1357	16	8/8	11/24				(plastic paper)		very moist				
S-9	17	7/7					Tintail		"no waste"				
1345	18	7/8	20/24				Silty clayey fine grained sand	SC					
S-10	19	7/8							wet				
1352	20	8/8	19/24						saturated				
S-11	21	6/10							\$				
1357	22	12/14	21/24						saturated				
S-12	23	13/15							"no waste"				
1403	24	21/23	23/24						saturated				
				Dense									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: 140 15. Hammer falling 30-inches
4.25-inch I.D. HSA
2" ID Split spoon Samplers collected 05-61501-2022 for analysis

Drilling Area

Background (ppm):

Converted to Well: Yes No X Well I.D.: N/A



BORING LOG

Page 1 of 1

PROJECT NAME:
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

NWS - EARLE

CTD - 289

JCA - Drilling

CME - 55

BORING NUMBER: 05-GB-02

DATE: 6-18-97

GEOLOGIST: PAUL DAVIS

DRILLER:

Steve Turner / Jon Urban

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
							grass/roots						
S-1	0.0	3/5			loose	orange brown	Silty fine gr. sand	SM					
144B	2.0	5/7	14/24		med. dense	grayish brown	Silt & F. Gr. sand	SM	Dry				
S-2	3.0	7/8					Silty clay	SC	Dry				
1451	4.0	10/13	14/24			↓ gray	Silty clayey fine grained sand		(charred wood)				
S-3	5.0	15/21			dense		NO Recovery		(piece of wood				
1455	6.0	15/21	0/24		very dense		NO Recovery		in spoon shoe)				
S-4	7.0	24/22			dense		NO Recov.						
1457	8.0	25/21	9/24		dense	↓	NO. Recov.						
S-5	9.0	8/5			med. dense	dark olive green	Silty clayey F.G.	SC					
1552	10.0	5/6	12/24				charred wood paper, plastic		strong land-				
S-6	11	7/9					new paper paper plastic		fill odors				
1601	12	9/10	16/24			↓							
S-7	13	7/9					orange brown	SM					
1607	14	14/13	14/24				Silty F-M gr. Sand	SM					
S-8	15	17/11					↓ (part of wood)		landfill odors				
1615	16	13/10	16/24				Silty clayey fine	SC	landfill odors.				
S-9	17	13/15					grained sand		"no waste"				
1624	18	21/27	19/24			↓ olive green			very wet				
S-10	19	8/8			dense								
1629	20	9/10	20/24		med. dense								
S-11	21	3/2					loose						
1638	22	8/9	22/24				med. dense						
	23												
	24												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: 140 lb. hammer falling 30-inches

4.25-inch I.D. HSA collected 05-GB-02-1A16 for analysis

2" ID Split spoon Samplers

Drilling Area

Background (ppm):

Converted to Well:

Yes

No

X

Well I.D. #:

N/A



BORING LOG

Page 1 of 1

PROJECT NAME:
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

NWS - EARLE
CTD - 289
JCA - Drilling
CME - 55

BORING NUMBER: 05-GB-03DATE: 6-19-97GEOLOGIST: PAUL DAVISDRILLER: Steve Burger / Jon Urban

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)		
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole BZ
	0.0											
S-1 P	0.0	3/4			loose	brn.	silty fine grained sand	sm	dry			
0807	2.0	1/4	3/24		↓	sand	(wood, plastic)	sc				
S-2 P	3.0	8/10		med dense			silty clayey f.g. sand	sm				
0810	4.0	15/16	12/24	DEASe			silty f.g. sand	sm	moist			
S-3 P	5.0	3/3		loose	↓			↓	↓			
0814	6.0	5/6	15/24	med dense	greenish brn.		silty clay	cl	moist			
S-4 P	7.0	3/4		loose	olive brn.		silty clayey f.g. sand	sc	(Landfill odors)			
0819	8.0	6/9	17/24	med dense	↓		(wood, paper, plastic)	sc	moist			
S-5 P	9.0	7/6		↓					L.F. odors			
0822	10.0	5/9	16/24	↓	gray brn.		(charred wood)	sm	moist			
S-6 P	11	3/6		loose	olive brn.	↓	(plastic, paper)	sc	L.F. odors			
0827	12	7/8	15/24	med dense			silty f.g. sand	sm				
S-7 P	13	6/7		↓			(trace of clay)	sc	"NO waste"			
0834	14	8/8	16/24	↓	olive brn.	↓		↓	moist			
S-8 P	15	7/8		orange clayey silty f.g. sand	sc		(some clay)	sc				
0842	16	9/9	18/24	↓					moist			
S-9 P	17	2/8							"NO waste"			
0850	18	8/8	18/24						very moist			
S-10 P	19	7/8		↓					wet			
0855	20	8/9	20/24						saturated			
S-11 P	21	3/3		loose					"NO waste"			
0900	22	4/3	14/24	↓					saturated			
S-12 P	23	3/4		↓								
0905	24	4/5	20/24	↓				↓				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: 140 lb. hammer falling 30-inches
4.25-inch I.D. HSA collected 05-GB-03-1820 for analysis
2" ID Split spoon Samplers

Drilling Area

Background (ppm):

Converted to Well: Yes No X Well I.D.: N/A



BORING LOG

Page 1 of 1

PROJECT NAME:
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

NWS - EARLE

CTO - 289

JCA - Drilling

CME - 55

BORING NUMBER:

05-6B-04

DATE:

6-19-87

GEOLOGIST:

PAUL DAVIS

DRILLER:

Steve Burger / Jon Urban

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S •	Remarks	PID/FID Reading (ppm)		
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole BZ
												Driller BZ*
S-1	0.0	3/6			loose	Brown	Silty fine gr. sand	SD	moist			
0936	2.0	12/14	12/24		med dense	olive brown	Silty clayey F.G. Sand	SC				
S-2	3.0	14/13			olive green		Clayey Fine grained	SC				
0939	4.0	11/8	18/24				Sand		moist			
S-3	5.0	10/8										
0945	6.0	3/3	6/24		loose		(wood)		wet			
S-4	7.0	4/5					NO Recovery					
0947	8.0	5/5	0/24				NO Recovery					
S-5	9.0	7/10			med dense		Silty clayey F.G. Sand	SC	saturated			
0949	10.0	11/7	15/24				(paper plastic)					
S-6	11	6/6					Clayey Fine grained Sa.	SC	saturated			
0954	12	6/5	15/24				(wood)					
S-7	13	10/13					Silty Clayey F.G. sand	SC	saturated			
1001	14	13/13	14/24						"no waste"			
S-8	15	13/13							saturated			
1010	16	15/14	15/24									
S-9	17	13/14					Silty fine grained	SD	saturated			
1018	18	15/13	13/24				Sand (some clay)					
S-10	19	5/7										
1024	20	9/9	20/24						saturated			
S-11	21	3/2			loose		Silty Fine to medium	SD	saturated			
1030	22	1/1	20/24		very loose		grained sand					
S-12	23	2/1			loose							
1034	24	5/8	23/24		red dense	olive brown	Silty F.G. sand	SD	saturated			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: 140 lb. hammer falling 30-inches
 4.25-inch I.D. HSA collected 05-6B-04-2022 for analysis
 2" ID Split spoon Samplers

Drilling Area

Background (ppm):

Converted to Well:

Yes

No

X

Well I.D. #:

n/a



BORING LOG

Page 1 of 1

PROJECT NAME:
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

NWS - EARLE

CTO - 289

JCA - Drilling

CME - 55

BORING NUMBER: 05-GB-05

DATE: 6-19-87

GEOLOGIST:

DRILLER:

PAUL DAVIS

Steve Burger / Jon Urban

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S •	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole BZ**	Driller BZ**
S-3	5.0	12/24			loose	olive green	Silty Fine grained sand	•	moist				
					loose	↓	(paper, plastic)	•					
				mod dense	mod dense	olive green	Silty clayey f. Gr. sand	•	moist to wet				
					↓		(wood)	•	very moist				
				mod dense	-		NO Recovery	-	Auger Thru.				
					-		No Recovery	-					
				mod dense	-		Auger Thru	-	Auger cuttings: wire, cans, metal straps, wood.				
					-	↓	↓	-	metal straps, wood.				
				mod dense	mod dense	olive green	Silty clayey F. Gr. sand	•	very moist				
					↓		(paper, plastic)	•	Landfill odors				
				mod dense	mod dense	gray-green	Silty Fine gr. sand	•	Landfill odors				
					↓	olive	(paper, plastic)	•	Landfill odors				
				mod dense	-		Auger Thru	-	On wood				
					-	↓	↓	-	auger thru.				
				mod dense	mod dense	olive	Silty clayey fine grained sand	•	L.F. odors				
					↓		grained sand	•	very wet. "No waste"				
				mod dense	-			-	saturated				
					-			-	L.F. odors				
				mod dense	-			-	saturated				
					-			-	"No waste"				
				mod dense	mod dense	olive	loose	•	saturated				
					↓		mod dense	•	"No waste"				
				mod dense	-			-	saturated				
					-			-	"No waste"				
				mod dense	-			-	saturated				
					-			-	"No waste"				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: 140 lb. hammer falling 30-inches
4.25-inch I.D. HSA
2" ID Split spoon Samplers collected 05-GB-05-2224 for analysis

Drilling Area

Background (ppm):

Converted to Well:

Yes

No

Well I.D. #: N/A

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APPENDIX G

SOIL BORING LOGS - SITE 5 (PREVIOUS INVESTIGATIONS)

3.6.1.2. Food Safety and Sustainability

Food Safety

Food safety is a critical concern for consumers and the food industry.

Food safety refers to the prevention of foodborne illnesses and the protection of public health.

Food safety is achieved through various measures, including:

- Proper food handling and storage

- Hygiene practices, such as handwashing and proper personal hygiene

- Use of safe ingredients and food additives

- Proper cooking and heating of food to kill harmful bacteria

- Proper labeling and traceability of food products

- Compliance with food safety regulations and standards

Food safety is a complex issue that requires a multidisciplinary approach involving government agencies, food manufacturers, retailers, and consumers.

Food safety is essential for maintaining public health and ensuring the quality and safety of the food we eat.

WESTON
EST. 1900 • CORN FLAKES

DRILLING LOG

US NAVY

WELL NUMBER: 5-1 OWNER: WPNSTA Earle
LOCATION: Landfill West
of Army Barricades ADDRESS: Colts Neck
New Jersey

SURFACE ELEVATION: 108.77' **TOTAL DEPTH** 29'
WATER LEVEL: 18'

DRILLING DRILLING DATE
COMPANY: J.E. Fritts METHOD: HSA DRILLED: 2/20/86
DRILLER: WL HELPER: RI

LOG BY: AEB

SKETCH MAP

DEPTH (FEET)	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE BLOWS*	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
0					0-5' Dark brown (10YR 3/3) becoming pale brown fine to medium sand.
5		103	Ss	4/8	4-4.3' Olive yellow (2.5Y 6/6) sandy silt.
				8/10	4.3'-4.9' Olive (5Y 4/4) and olive brown (2.5Y 4/4) medium to coarse sand with some (10%) silt, wet, Rec. = 10"
10		104	Ss	18/21	9'-9.5' Olive (5Y 4/4) and yellowish brown (10YR 6/8) medium to coarse sand with some (10%) silt, damp, Rec. = 6"
15		105	Ss	WDR/6/8/13	14'-14.25' Olive (5Y 4/4) and yellowish brown medium to coarse sand with 10% silt, slightly wet, Rec. = 15"



DRILLING LOG

WELL NUMBER:	5-1	OWNER:	WPNSSTA Earle		
LOCATION:	Landfill west of Army Barricades	ADDRESS:	Colts Neck New Jersey		
SURFACE ELEVATION:	108.77'	TOTAL DEPTH	29'		
DRILLING COMPANY:	J.F. Fritts	DRILLING METHOD:	HSA	DATE DRILLED:	2/20/86
DRILLER:	WL	HELPER:	RI		
LOG BY:	AEB				

SKETCH MAP

Well Construction Summary

Location or Coords: Landfill West
of Army Barricades

Elevation: Ground Level _____

Top of Casing 108.77'

Location Personnel
Project

Drilling Summary:

Total Depth 29'

Borehole Diameter _____

Driller J.E. Fritts

Rig Track Rig

Bit(s) Hollow Stem Auger ;
Roller Bit

Drilling Fluid Water

Surface Casing 6" Steel Locking

Well Design:

Basis: Geologic Log Geophysical Log _____

Casing String(s): C = Casing S = Screen

3' - GST2' C1 29' - 14' S

14' - GST2' C2 _____

</div



DRILLING LOG

WELL NUMBER: 5-2
 LOCATION: Landfill west of Army Barricades
 SURFACE ELEVATION: 113.96'
 DRILLING COMPANY: JE Fritts
 DRILLER: NL
 LOG BY: AEB

US NAVY
 1711-04-14
 OWNER: WPNSA Eagle
 ADDRESS: Colts Neck New Jersey
 TOTAL DEPTH 28'
 WATER LEVEL: 18'
 DRILLING METHOD: HSA
 HELPER: RI

SKETCH MAP

NOTES:

"Surface Elevation" = Top of PRC

DEPTH (FEET)	GRAPHIC LOG			DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE BLOWS*	
0				0-3' Pale brown (10YR 6/3) fine to medium sand.
5	72 S _s 3			3'-4' Strong brown (7.5YR 5/8) fine to medium sand.
7.25				4'-5' Light gray (10 YR 7/1) with strong brown (7.5YR 5/8) very fine sand.
10				5'-5.25' Dark grayish brown (10YR 4/2) clayey silt.
12.5				5.25'-5.5' Dark grayish brown (10YR 4/2) silty very fine sand, wet to saturated, Rec = 18".
14	73 S _s 5			9'-10.5' Strong brown (7.5YR 4/6) medium sand, little fine sand (5%), moist, Rec = 18".
15				Water perched above 9'
16.5	74 S _s 3			14'-15.5' Strong brown (7.5YR 4/6) medium sand, trace fine sand, moist, Rec = 18".
20	75 S _s 4			19'-20.5' Olive (5y 4/4) medium sand,

DRILLING LOG

WELL NUMBER: 5-2
 LOCATION: Landfill w/rst
of Army Barricades
 SURFACE ELEVATION: 113.96'
 DRILLING COMPANY: JE Fritts DRILLING METHOD: HSA DATE DRILLED: 1/21/81
 DRILLER: WL HELPER: RI
 LOG BY: AEB

US NAVY

17716
 OWNER: WPAFSTA 1 Earle
 ADDRESS: Ft. E. Colby Neck
New Jersey

TOTAL DEPTH 28'

WATER LEVEL: 18'

SKETCH MAP

NOTES:

DEPTH (FEET)	GRAPHIC LOG				DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE BLOWS*		
20			8 1/2		Saturated, Rec = 18"
25	76 Ss WOR 6 9 12				24'-25.5' Olive (5y 4/4) clean medium Sand, saturated, Rec = 18"
30	77 Ss 6 7 13 19				29'-31' Olive brown (2.5y 4/4) medium sand, trace (10%) fine sand, saturated, Rec = 24"

Well 5-2

Well Construction Summary

Location or Coords: Landfill West
of Army Barricades

Elevation: Ground Level _____
Top of Casing 113.96'

Location Personnel
Project

Drilling Summary:

Total Depth 28'

Borehole Diameter _____

Driller J.E. Fritts

Rig Mobil Drill B-61

Bit(s) Hollow stem Auger,
Roller Bit

Drilling Fluid Water

Surface Casing 6" Steel Locking

Well Design:

Basis: Geologic Log Geophysical Log _____

Casing String(s): C=Casing S=Screen

3' - GS+2' C1 28' - 13' S

13' - GS+2' C2

Casing: C1 6" Steel

C2 4" SCH 40 PVC

Screen: S1 4" SCH 40 PVC

10 SLOT

S2 _____

Centralizers _____

Filter Material #2 Ottawa Sand
28' - 11' below GS

Cement 6:1 Portland cement:
bentonite 9' - GS

Other Bentonite Pellets
11' - 9' below GS

Construction Time Log:

Task	Start		Finish	
	Date	Time	Date	Time
Drilling:				
<u>HSA</u>	<u>1/21/86</u>	<u>1000</u>	<u>1/21/86</u>	<u>1145</u>
<u>Roller Bit</u>	"	"	"	<u>1210</u>
Geophys. Logging:				
Casing:				
<u>Install 4"</u>	"	<u>1330</u>	"	<u>1400</u>
<u>PVC</u>				
Filter Placement:	"	<u>1400</u>	"	<u>1630</u>
Cementing:	"	<u>1630</u>	"	<u>1700</u>
Development:				
Other:				

Well Development:

Well did not sustain pumping
Pumped 2 gallons every 10 minutes

Comments:

DRILLING LOG

WELL NUMBER: 5-3
 LOCATION: Landfill West of Army Barricades
 SURFACE ELEVATION: 109.78'
 DRILLING COMPANY: J.E. Fritts DRILLING METHOD: Auger DATE DRILLED: 3/3/86
 DRILLER: WL HELPER: RI
 LOG BY: AFB

US NAVY

OWNER: INPSA CharlieADDRESS: Colts Neck - New JerseyTOTAL DEPTH 32'WATER LEVEL: 20'

NOTES:

"Surface Elevation" = Top of PVC

DEPTH (FEET)	GRAPHIC LOG			DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE BLOWS	
0				0-5' Yellowish brown (10YR 6/8) silty sand
5				
5.5	125 Ss 4	2		5'-5.5' Pale yellow (2.5Y 7/4) very fine sand,
		4		
		12		5.5'-6' Light olive brown (2.5Y 5/6) sandy
				silt, wet, Rec = 12".
10				
10	126 Ss 4	3		10'-11.5' Dark yellowish brown (10YR 4/6) with
		5		olive (5Y 4/4) fine to medium sand,
		8		10% silt, damp, Rec = 18".
15				
15	127 Ss 4	5		15'-15.5' Pale yellow (2.5Y 7/4) fine sand
		9		
		13		15.5'-16' Dark yellowish brown (10YR 4/6) with
				olive fine to medium sand, 10%
				silt, slightly wet, Rec = 12".

WESTON
US NAVY

DRILLING LOG

WELL NUMBER: 5-3

LOCATION: Landfill West
of Army Barricades

SUBFACE ELEVATION: 109.78'

DRILLING COMPANY: J.E. Fritts DRILLING
DRILLER: WL METHOD

LOG BY: AEB

OWNER: WPNUSTA Earle

ADDRESS: Colts Neck
New Jersey

TOTAL DEPTH 32'

WATER LEVEL: 20'

NAME : DATE : / /

EURE

1771-C2-13

SKETCH MAP

DEPTH (FEET)	GRAPHIC LOG			SAMPLE NUMBER SAMPLE TYPE SAMPLE BLOWS*	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	128	Ss	5 7 9 12		
20					20'-20.5' Dark yellowish brown (10YR 4/6) with olive (5Y 4/4) fine to medium sand, 15-20% silt becoming less silty (to 5% silt) with depth, Saturated, Rec = 6"
25	129	Ss	7 8 13 22		25'-25.5' Yellowish brown (10YR 5/6) sandy silt. 25.5'-26' Olive (5Y 4/4) fine to medium sand, Saturated, Rec = 12"
30	130	Ss	7 8 13 22		30'-30.9' Olive (5Y 4/4) and dark yellowish brown (10YR 4/6) fine to medium sand with 10-15% silt, Saturated, Rec = 10"

DRILLING LOG

WELL NUMBER: 5-4
 LOCATION: Landfill west of Army Barricade
 SURFACE ELEVATION: 105.65'
 DRILLING COMPANY: J.E. Fritts DRILLING METHOD: Auger DATE DRILLED: 2/9/86
 DRILLER: WL HELPER: RI
 LOG BY: AB

SKETCH MAP

US N°

NOTES:

"Surface Elevation" = Top of PVI

DEPTH (FEET)	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE BLOWS*	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
0					0-5' Olive yellow (2.5Y 6/6) to olive brown (2.5Y 4/4) medium to coarse sand.
5		98	2 11 18 22		4'-4.4' Light yellowish brown (2.5Y 6/4) with light gray (10YR 7/1) fine to medium sand. 4.44'-4.9' Olive yellow (2.5Y 6/6) fine to medium sand. 4.9'-5.25' Olive (5Y 4/4) fine to medium sand with some (25%) silt. Rec = 15", damp.
10		99	9 25 23 26		9'-9.25' Gray (5Y 6/1) fine to medium sand 9.75'-9.9' Olive yellow (2.5Y 6/6) fine to medium sand 9.9'-10.25' Olive (5Y 4/4) and olive brown (2.5Y 4/4) fine to medium sand with little (10%) silt, damp, Rec = 15"
15		100	6 10 15 14		14'-15' Olive (5Y 4/4) and olive brown (2.5Y 4/4) medium to coarse sand, wet, Rec = 12"



DRILLING LOG

WELL NUMBER: 5-4
LOCATION: Landfill west
of Army Barricades
SURFACE ELEVATION: 105.65'

OWNER: F.H. USFA Earle
ADDRESS: Colts Neck
New Jersey
TOTAL DEPTH 27'
WATER LEVEL: 17'

DRILLING COMPANY: JE Fritts DRILL
DRILLER: WL METH

NG
DD: HSA DATE
DRILLED: 2/19/86
HELPER: PT

LOG BY: AEB

SKETCH MAP

Weill 5-4

Well Construction Summary

Location or Coords: Land-fill West
of Army Barricades

Elevation: Ground Level _____
Top of Casing _____ 105.63

MONITOR WELL 5-5

Project	N.W.S. Earle/ Colts Neck				Well Number	MW05-5
Location	Colts Neck, N.J.				Coordinates	
Geologist	N. Pulczak				Top of Casing Elevation	112.05 feet MSL
Drilling Contractor	B. L. Myers				Groundsurface Elevation	feet
Driller	B. Stringer				Total Borehole Depth	55.0 feet
Drilling Method	Hollow stem auger				Total Well Depth	28.5 feet
Diameter of Borehole	11.5 (7.5) inches				Date Started	1/18/91
Diameter of Well Casing	4 inches				Date Well Completed	1/18/91
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	* RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
0	20 slot pvc screen	3.8 10.13	75		SW	0.0-2.0 Brownish yellow (10YR6/8), SAND, fine-med grain, trace coarse grain, damp.
2		6.10 18.16	50			2.0-4.0 Olive (5Y5/4), SAND, med. grain, 10% fine 10% coarse, damp: 2.0-2.6: Brownish yellow SAND, as above. 2.6-4.0': Olive SAND.
4		6.13 16.19	45			
6		8.142 8.12	75			
8		8.13 15.11	75			
10		6.14 18.15	40			
12		7.11 12.12	80			
14	sand pack: mix #1 & #2	6.10 7.9	80			6.0-8.0 Same as above, trace silt, no Qtz. At 6.8-7.0ft. found paper/cardboard , dry
16	dentonite seal	6.7 8.12	75			8.0-10.0 Light gray (10YR7/1), SAND, med. - fine grain, trace coarse sand, trace organics (roots), peat fragment- pos. charred wood, v. low plast., dry.
18		7.7 10.13	85			
20		3.5 12.17	100			10.0-12.0 10.0-10.6: Same as above. Wood fragments at 10.4-10.6ft. 10.6-11.6: Olive (5Y5/4) and Brownish yellow (10YR6/8) mix, med. grain, low plast., dry.
22		7.8 8.10	100			
24			100			12.0-14.0 Olive (5Y5/4), White and Olive yellow (2.5Y6/6) mix, SAND, med grain, trace fine (5%), trace coarse (2%), firm, Fe stain @13.2ft, low plast., dry.
26			100			
28			100			14.0-16.0 Same as above w/o Olive Yellow component, dry.
30						16.0-18.0 Dark green (5GY4/1), SAND, med.-coarse grain, trace fine, moist.

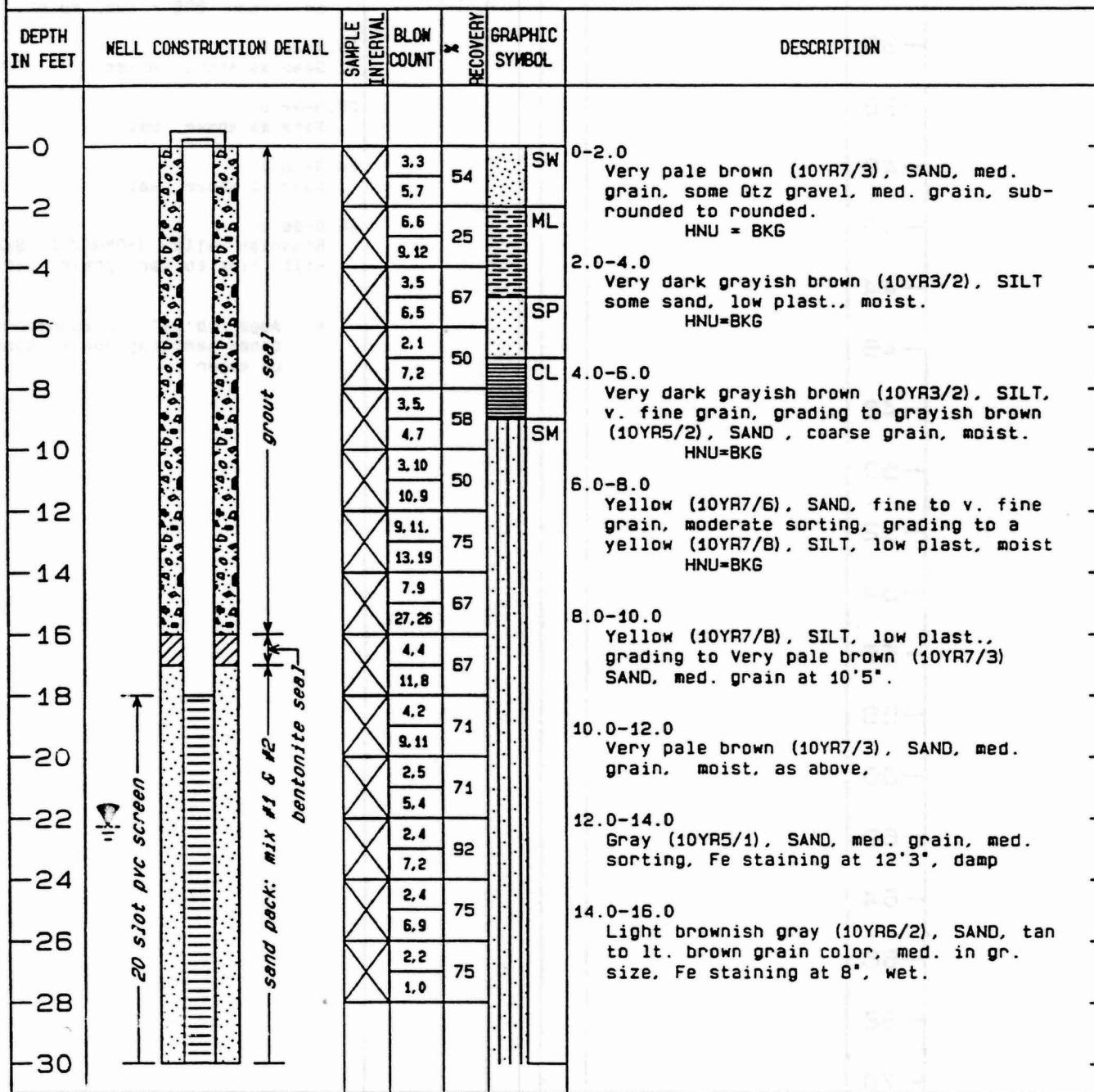
MONITOR WELL 5-

PROJECT N.W.S. Earle/ Colts Neck						WELL NUMBER MW05-5
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
-30						18.0-20.0 Olive (5y5/4). SAND, med- coarse grain. trace fine sand & silt, little orange sand, med grain, wet.
-32						20.0-22.0 Same as above. wet
-34						22.0-24.0 Same as above. wet.
-36						24.0-26.0 Same, with increase in coarse fraction, wet.
-38						26.0-28.0 Same, wet.
-40						
-42						
-44						
-46						
-48						
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-70						

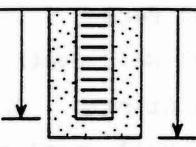
MONITOR WELL 5-6

Project N.W.S. Earle/ Colts Neck
 Location Colts Neck, N.J.
 Geologist T. McCann
 Drilling Contractor B. L. Myers
 Driller B. Stringer
 Drilling Method Hollow stem auger
 Diameter of Borehole 11.5 (7.5) inches
 Diameter of Well Casing 4 inches

Well Number MW05-6
 Coordinates _____
 Top of Casing Elevation 117.30 feet MSL
 Groundsurface Elevation feet
 Total Borehole Depth 33.5 feet
 Total Well Depth 33.0 feet
 Date Started 1/22/91
 Date Well Completed 1/23/91



MONITOR WELL 5-

PROJECT N.W.S. Earle/ Colts Neck		WELL NUMBER MW05-6				
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	*RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
30					SM	16.0-18.0 Yellowish brown (10YR5/4), SAND, fine to med. grain, damp
32						18.0-20.0 Brownish yellow (10YR6/6), SAND, fine to med. grain, 5%-green (glauconitic), 15%-dk. brown, 80% = tan, moist.
34						20.0-22.0 Same as above, moist.
36						22.0-24.0 Same as above, wet
38						24.0-26.0 same as above, wet.
40						26.0-28.0 Brownish yellow (10YR6/6), SAND little silt, fine to med. grain, wet.
42						
44						
46						* Auger to 34'. Discontinue split spoon sampling due to sands running up auger.
48						
50						
52						
54						
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MONITOR WELL 5-7

Project N.W.S. Earle/ Colts Neck
Location Colts Neck, N.J.
Geologist T. McCann
Drilling Contractor B. L. Myers
Driller B. Stringer
Drilling Method Hollow stem auger
Diameter of Borehole 11.5 (7.5) inches
Diameter of Well Casing 4 inches

Well Number MW05-7
Coordinates _____
Top of Casing Elevation 113.97 feet MSL
Groundsurface Elevation feet
Total Borehole Depth 30.5 feet
Total Well Depth 29.8 feet
Date Started 1/23/91
Date Well Completed

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	% RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
0						0.0-2.0 Pale brown (10YR6/3), SILT, v. low plast., damp.
2						2.0-4.0 Very dark grayish brown (10YR3/2), SILT, low to med plast., grades to v. low plast. silt after 10', damp.
4						4.0-6.0 Very dark grayish brown (10YR3/2), SILT, as above, more clay stringers apparent, damp.
6						6.0-8.0 Gray (5G5/1), SAND and SILT, v.f. to fine, Glauconitic, 10% green grains v.f., 90% tan grains, v.f. to fine, trace Fe stains, damp.
8						8.0-10.0 Strong brown (7.5YR5/6), SAND, v.f. to fine, med. sorting, some Fe staining damp
10						10.0-12.0 Same as above: 10% green (glauconitic) sand, v.f. 90% tan sand v.f. to fine (Fe stains) damp.
12						12.0-14.0 Brown to Dark brown (7.5Yr4/4), same as above, slightly more glauconitic sand (15-20% total green grains), damp.
14						14.0-16.0 Same as above, damp
16						
18						
20						
22						
24						
26						
28						
30						

MONITOR WELL 5-

PROJECT N.W.S. Earle/ Colts Neck						WELL NUMBER MW05-7
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
-30						16.0-18.0 Strong brown (7.5YR5/6), SAND, v.f. to fine, less Glauconitic, damp 2-5% green glauconitic sand, v.f. 98-95% tan to orange sand, v.f to f.
-32						
-34						18.0-20.0 Same as above, damp.
-36						20.0-22.0 Same as above, wet.
-38						* Discontinue split spoon sampling due to running sands. Following samples taken from cuttings.
-40						24.0-26.0 Gray (7.5YR5/0), SAND and SILT, low plast..
-42						
-44						28.0-30.0 Brown (10YR5/4) SAND and SILT, v. fine, wet.
-46						
-48						
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MONITOR WELL 5-8

Project	N.W.S. Earle/ Colts Neck	Well Number	MW05-8			
Location	Colts Neck, N.J.	Coordinates				
Geologist	J. Williams	Top of Casing Elevation	110.30 feet MSI			
Drilling Contractor	B. L. Myers	Groundsurface Elevation	feet			
Driller	B. Stringer	Total Borehole Depth	25.0 feet			
Drilling Method	Hollow stem auger	Total Well Depth	24.5 feet			
Diameter of Borehole	11.5 (7.5) inches	Date Started	2/12/91			
Diameter of Well Casing	4 inches	Date Well Completed	2/13/91			
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	SAMPLE INTERVAL	BLOW COUNT	* RECOVERY	GRAPHIC SYMBOL	DESCRIPTION
0	20 slot PVC screen	5.4	83		SM	0-2.5 Sand and Silt, trace gravel, v. fine sand, Orange Brown, HNU=BKG
2		3.4				
4		4.4	60		ML	
6		4.5				
8		3.4	65			
10		6.6				
12		10.12	80		SW	2.5-6.0' Silt with trace clay, low plasticity, little (15%) fine to coarse sand and fine gravel, Fe precipitate at 4.6ft. HNU=BKG
14		11.14				
16		11.13	85			
18		14.16				
20		7.10	75		SP	6-10' Sand, fine to med. grain, little silt (10%), little Fe staining at 8-10 ft. HNU=BKG
22		15.19				d=10
24		8.11	75			10-20'
26		12.12				Sand, fine to med. grain, little (10%) to some (20%) silt, Olive Brown (2.5Y4/4), trace mica at 12', slightly cohesive at 17', low plasticity at 18-20'. HNU=BKG
28		6.11	85			
30		13.16				
		8.11	80			
		12.17				
		6.10	85			
		14.14				
		6.10	85		SW	20-24' Sand, fine-med., little (10%) silt, trace coarse sand, becomes Dark Yellow Brown (10YR4/6) at 20-22' then becomes Olive Brown again. HNU=BKG
		11.14				
		3.7	90			
		14.21				

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APPENDIX H

GEOTECHNICAL LABORATORY RESULTS - SITE 5

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VALLEY
FORGE
LABORATORIES, INC.

30th

1967-1997
ANNIVERSARY

Engineering Consultants Since 1967

SOIL LABORATORY TEST REPORT 6-6

Project No. 97128
June 30, 1997

Geotechnical
Engineering

Attention: Mr. Dan Witt
Brown and Root Environmental,
661 Andersen Drive
Foster Plaza 7
Pittsburgh, PA 15220

Construction
Quality Control

Re: Subcontract Agreement No. GCDB-97-526-1298, Analytical
Services
CTO No. 289 - Naval Weapons Station (NWS), Earle Colts
Neck, N.J.

Laboratory
Testing

Samples Picked Up: On 6/23/97 by VFL, 9 samples from 18 jars

Testing Completed: (As requested on Chain of Custody Form,
4 Samples at Level D P.P.E. and 5 Samples
at Level C P.P.E.)

NDT and
Related Services

Natural Moisture Content
Particle Size Analysis
(Sieve and Hydrometer)
Atterberg Limits
USCS Classification

ASTM Standard

D2216
D422

D4318
D2487

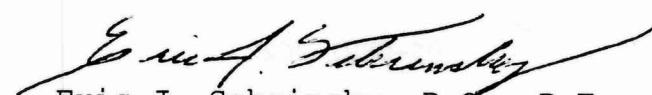
Research and
Special Studies

Results:

The results of the testing are graphically depicted on
the attached Grain Size Distribution Curves. If you have any
questions about this test report, please call.

Environmental
Engineering

Sincerely,



Eric J. Seksinsky, P.G., P.E.
Technical & Quality
System Manager

Transportation
and Traffic
Engineering

EJS:lcw
Enclosure
cc: Mike Wireman

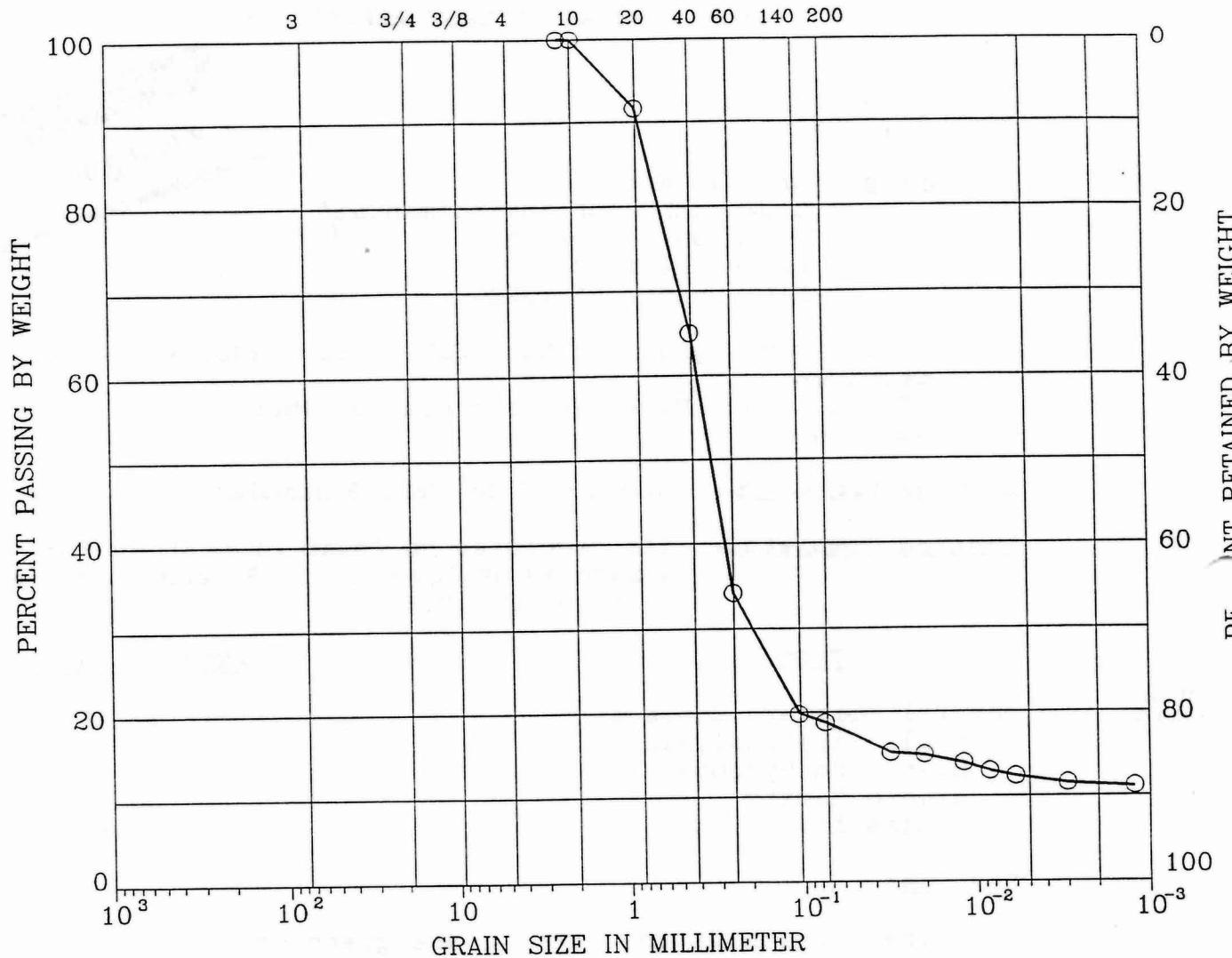
Fax (610) 688-8143

• 6 Berkeley Road, Devon, PA 19333-1397

• (610) 688-8517

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
U.S. SIEVE SIZE IN INCHES	U.S. STANDARD SIEVE No.			HYDROMETER		



SYMBOL BORING

LL (%) PI (%)

○

28

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DESCRIPTION

05-GB01-2022

Remark : NAT. MOISTURE CONTENT 22.6 LEVEL C P.P.E.

Project No. 97128

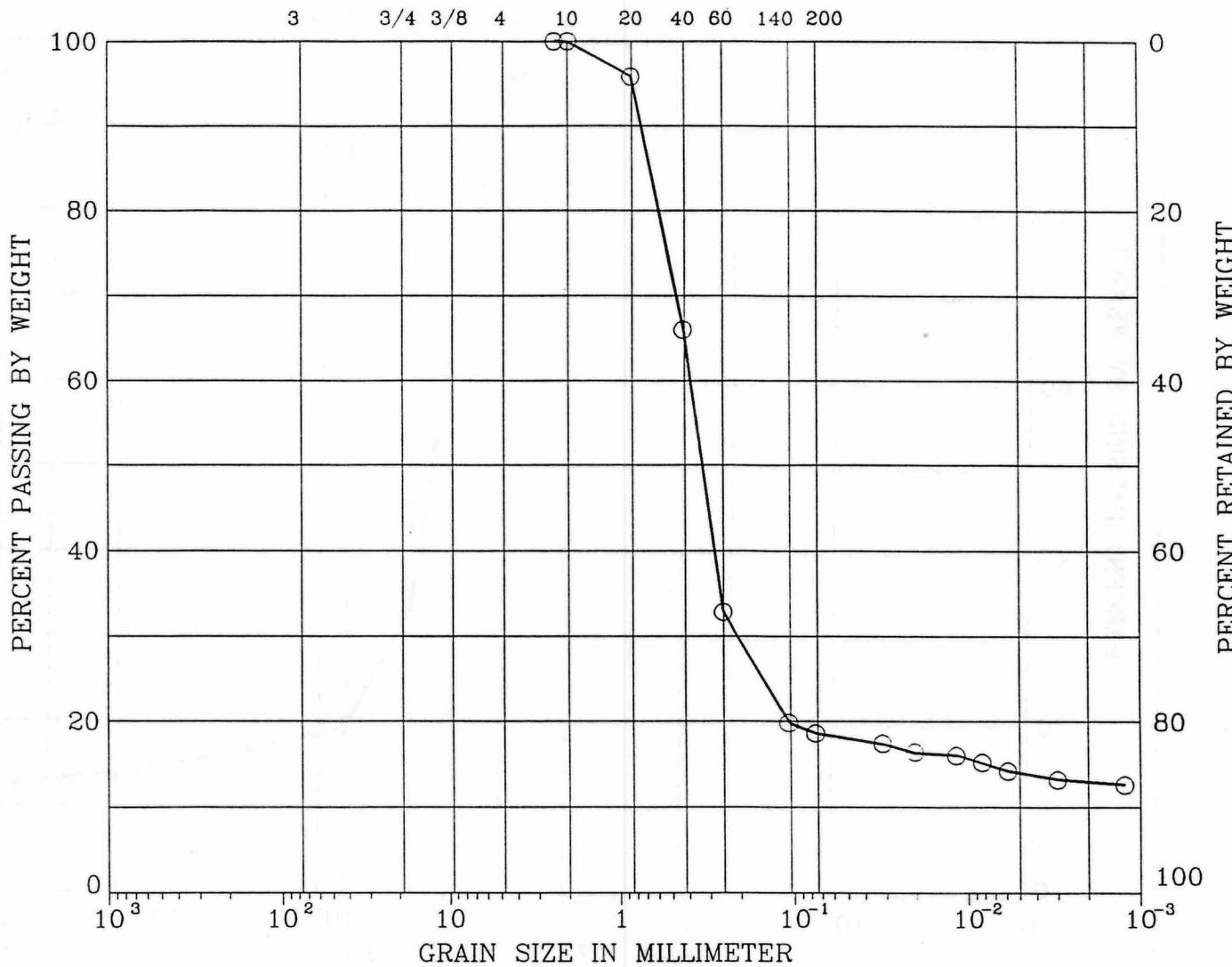
BROWN ROOT ENVIRONMENTAL

Valley Forge
Laboratories, Inc.

GRAIN SIZE DISTRIBUTION 6/30/97

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
U.S. SIEVE SIZE IN INCHES			U.S. STANDARD SIEVE No.			HYDROMETER



SYMBOL BORING

LL
(%) PI
(%) DESCRIPTION

O

24 5 GREEN SILTY, CLAYEY SAND (S!-SC)

05-GB02-1416

Remark : NAT. MOISTURE CONTENT 9.0 LEVEL C P.P.E.

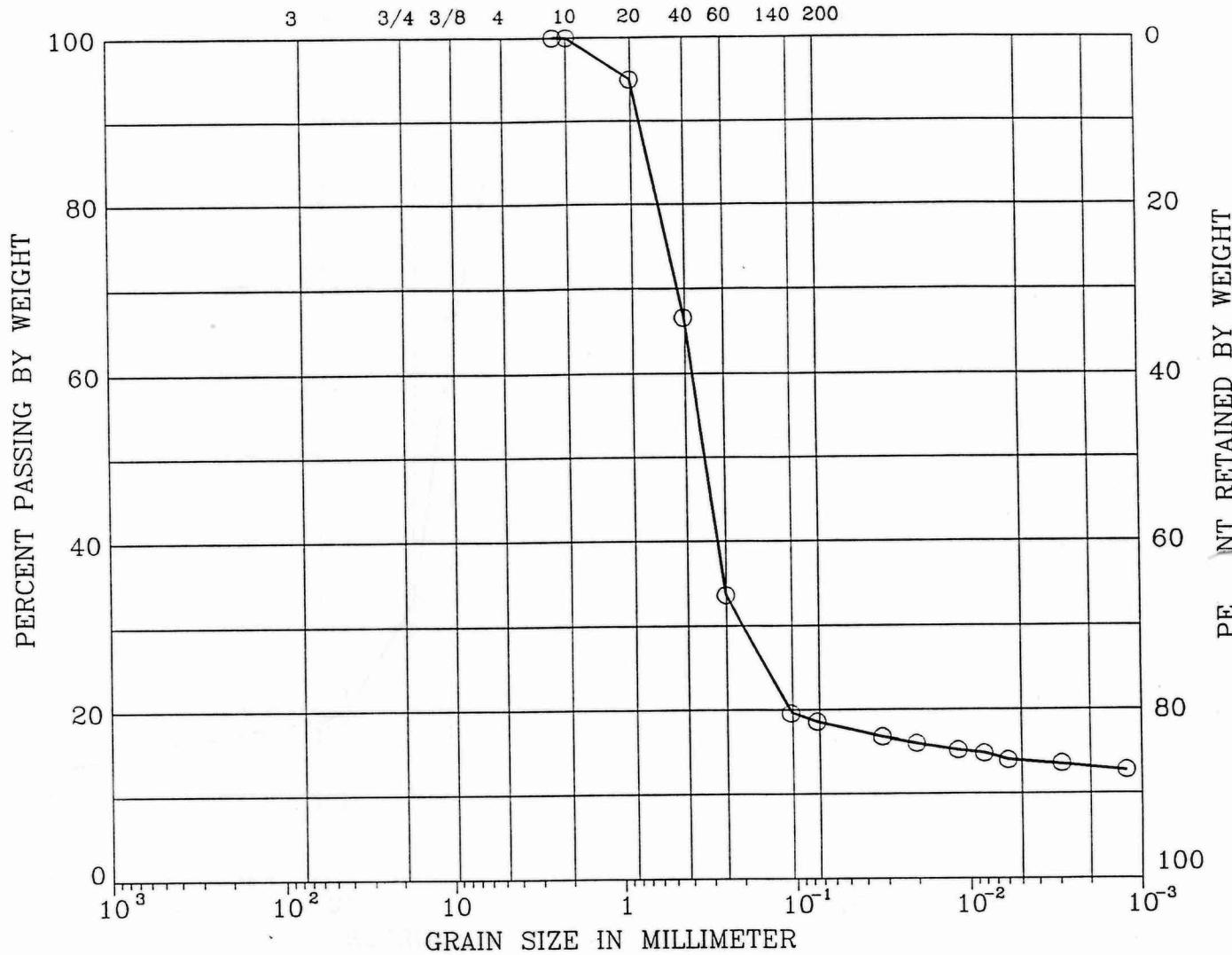
Project No. 97128 BROWN ROOT ENVIRONMENTAL

Valley Forge
Laboratories, Inc.

GRAIN SIZE DISTRIBUTION 6/30/97

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
U.S. SIEVE SIZE IN INCHES			U.S. STANDARD SIEVE No.			HYDROMETER



SYMBOL BORING

LL
(%)

PI
(%)

DESCRIPTION

○

05-GB03-1820

27

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GREEN CLAYEY SAND (SC)

Remark : NAT. MOISTURE CONTENT 19.7 LEVEL C P.P.E.

Project No. 97128

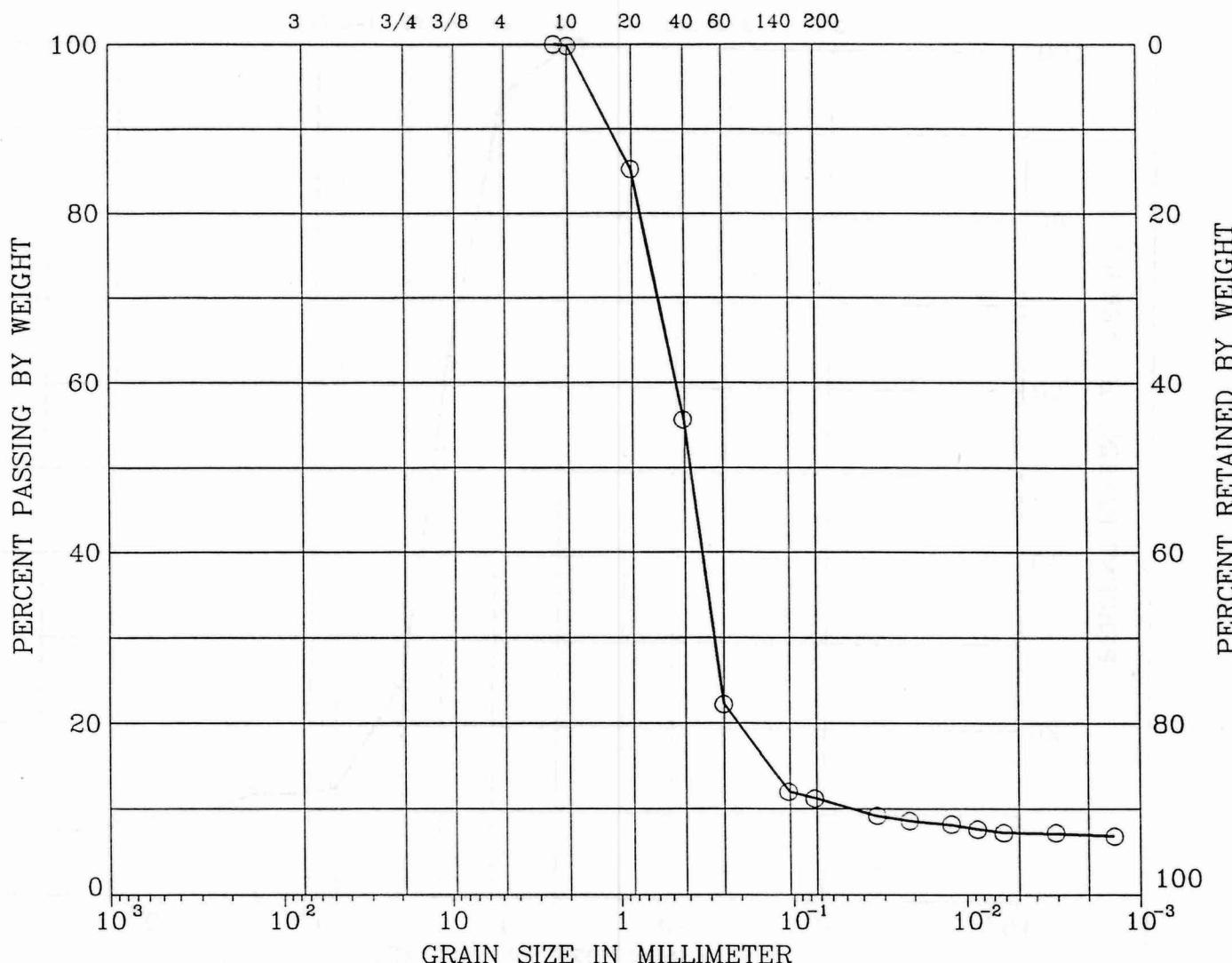
BROWN ROOT ENVIRONMENTAL

Valley Forge
Laboratories, Inc.

GRAIN SIZE DISTRIBUTION 6/30/97

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
U.S. SIEVE SIZE IN INCHES	U.S. STANDARD SIEVE No.			HYDROMETER		



SYMBOL BORING



05-GB04-2022

LL (%) PI (%) DESCRIPTION

NON-PLASTIC GREEN POORLY-GRADED SAND WITH SILT (SP-SM)

Remark : NAT. MOISTURE CONTENT 22.0 LEVEL C P.P.E.

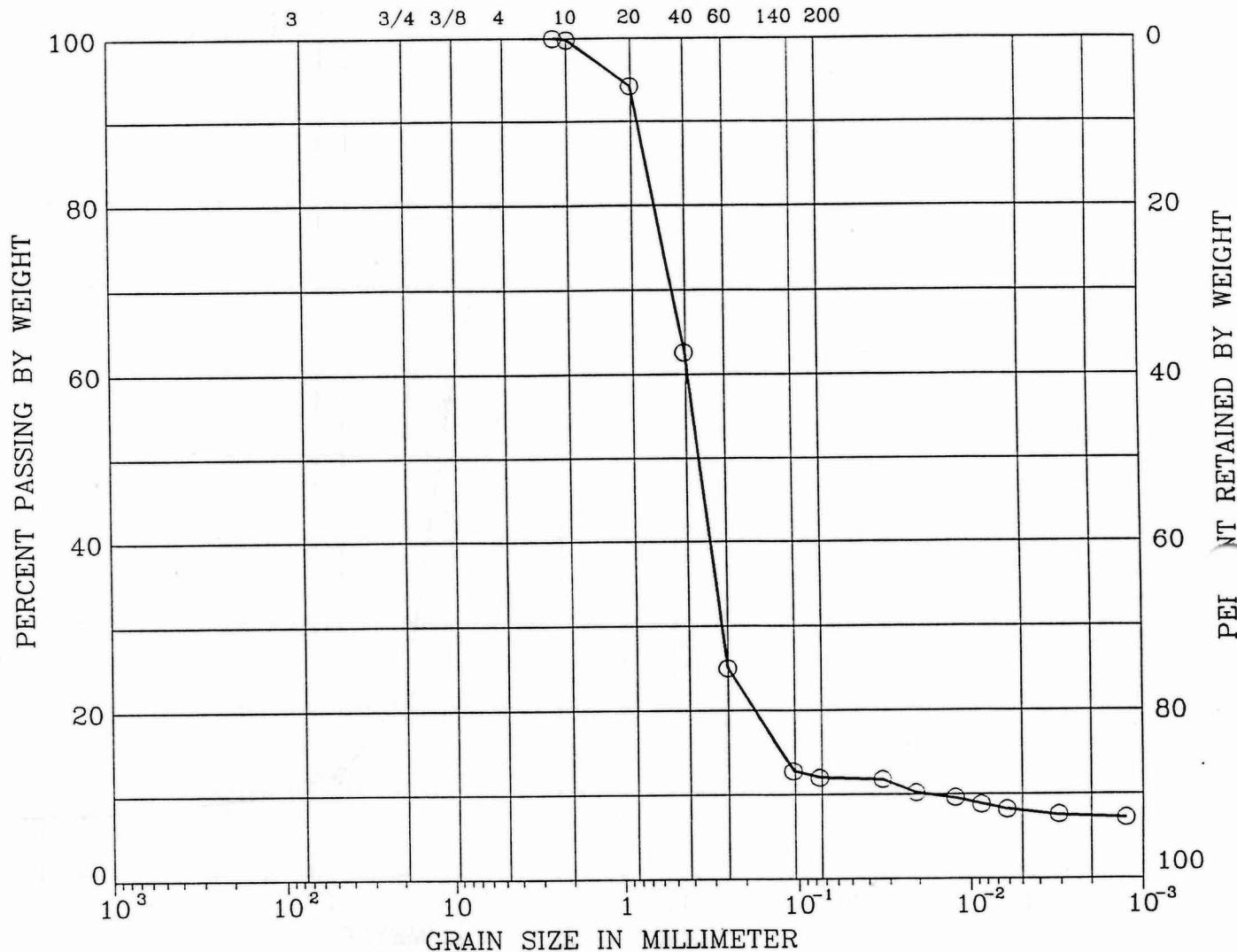
Project No. 97128	BROWN	ROOT ENVIRONMENTAL
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Valley Forge
Laboratories, Inc.

GRAIN SIZE DISTRIBUTION 6/30/97

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
U.S. SIEVE SIZE IN INCHES			U.S. STANDARD SIEVE No.			HYDROMETER



SYMBOL BORING

LL PI DESCRIPTION

○

NON-PLASTIC GREEN POORLY GRADED SAND WITH SILT (SP-SM)

05 - GB05-2224

Remark : NAT. MOISTURE CONTENT 21.7 LEVEL C P.P.E.

Project No. 97128

BROWN ROOT ENVIRONMENTAL

Valley Forge
Laboratories, Inc.

GRAIN SIZE DISTRIBUTION 6/30/97

APPENDIX I

TEST PIT LOGS - SITE 5

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TEST PIT LOG

Brown & Root Environment

PROJECT: NWS - EARL

PROJECT NO. CTO - 289

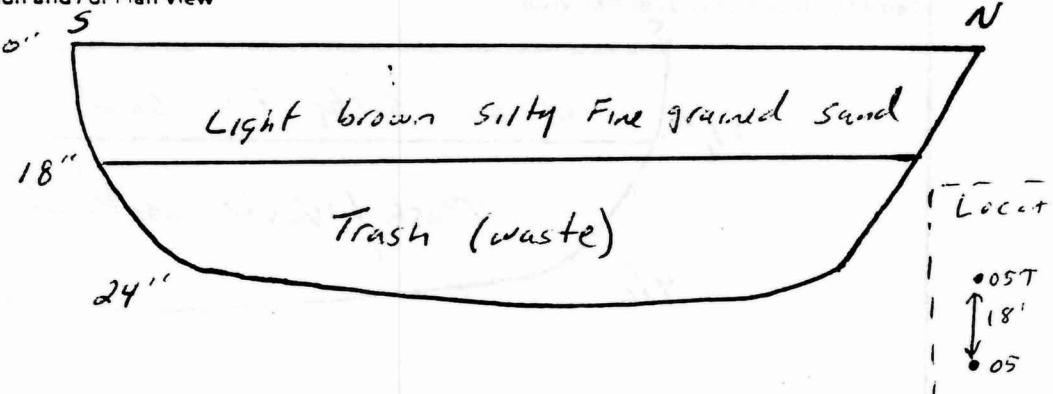
DATE: 6/23/97

TEST PIT NO.: 05-TP-0

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 2' x 9' long

Test site located in eastern side of landfill with shooter clearing.

PHOTO LOG

TEST PI

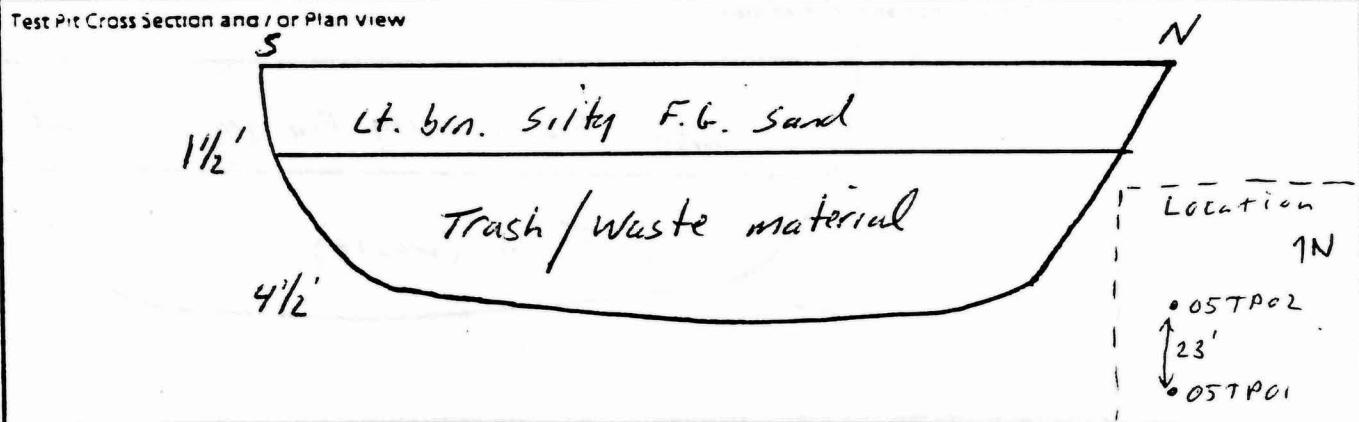
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TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLE TEST PIT NO.: 05-TP-C2
PROJECT NO. CTO - 289 DATE: 6/23/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 4 1/2' x 11' long.

Test pit located in eastern area of Landfill within Shooters Club Clearings.

PHOTO LOG

TEST PIT 05-TP-02

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL

PROJECT NO. CTO - 289

DATE: 6/23/77

TEST FIT NO.: 05-TP-03

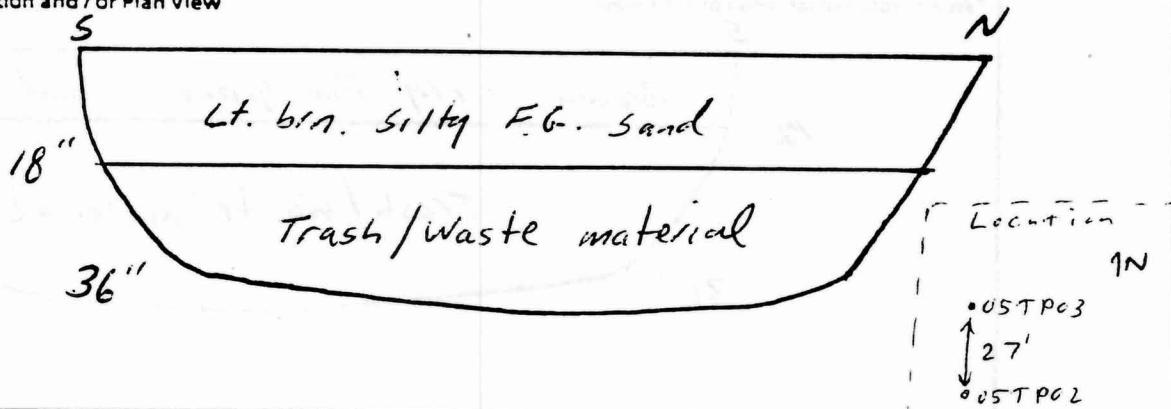
PROJECT NO. 287
LOCATION: Colfax, N.Y.

DATE: 6/23/97

LOCATION: 8013 Neck, N.J.
FIELD SPECIALIST B1

FIELD GEOLOGIST. . . PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 3' x 7' long

Test pit located in eastern area of land A11 within Sheetrock Club
(clearing).

PHOTO LOG Photo, - Views facing NW at Test pt.

TEST PIT 05-TP-03

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-04

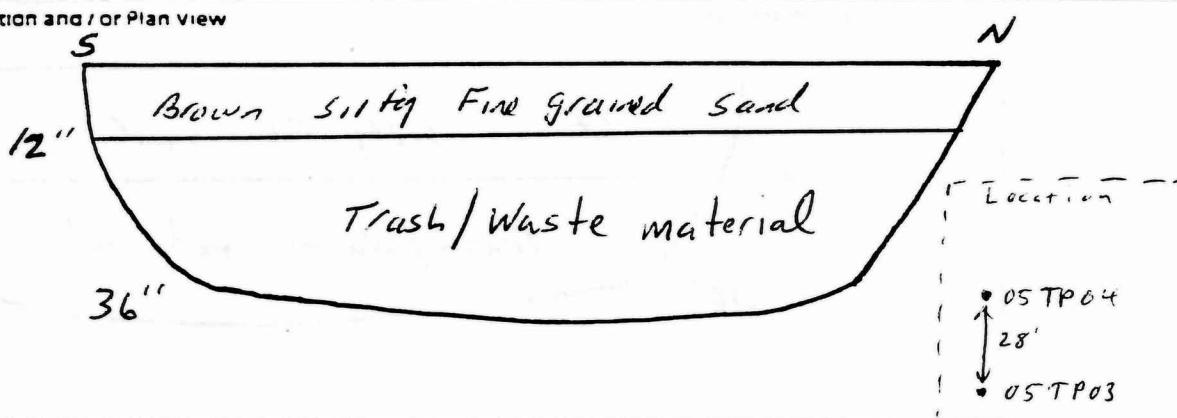
PROJECT NO. CTO - 289

DATE: 6/23/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3' x 8' long

Test pit located in North east area of land fill. Within shorter club clearings.

PHOTO LOG

TEST PIT 05-TP-04

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLF

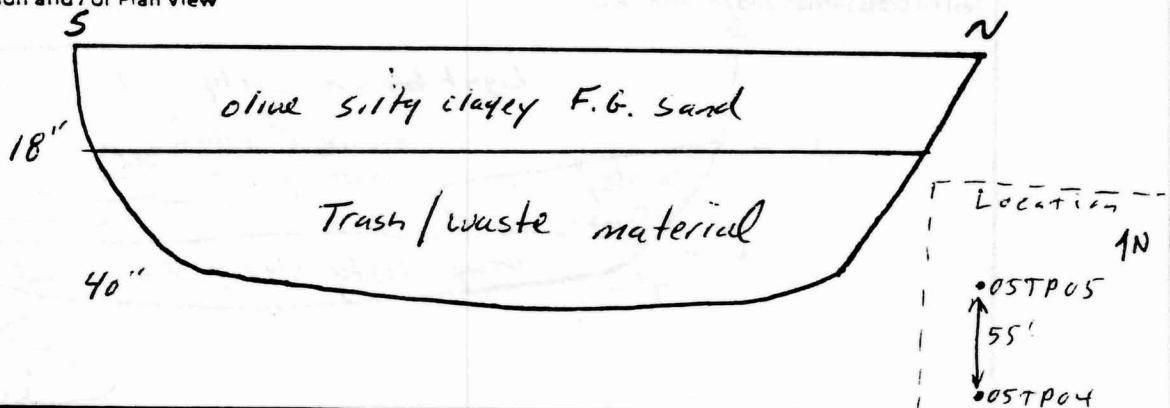
PROJECT NO. CTO - 289 DATE: 6/23/97

LOCATION: Colts Neck, N.J.

FIELD GEOLOGIST. PAUL M. DAVIS

TEST PIT NO.: C5-TP-05

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3.5' x 8' long.

Test plot located in northeastern area of land GII w.t. - Shooters Club clearings.

PHOTO LOG

TEST PIT 05-TP-05

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: 05-TP-06

PROJECT NO. CTO - 289

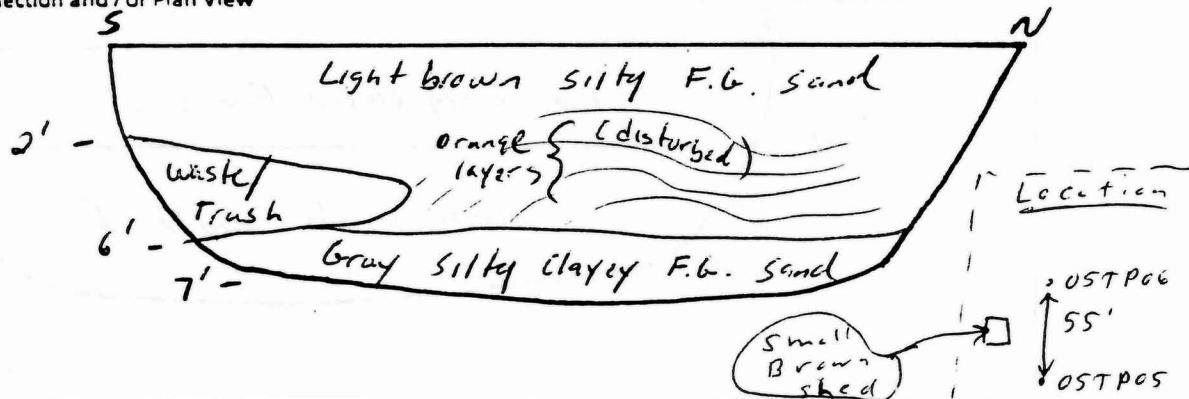
DATE: 6/25/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
1'		Light brown silty fine grained sand		
2'				
3'		Trash/waste material - lumber,		
4'		small drum with liquid in it,		
5'		gray silty clayey F.G. sand		
6'				
7'		Gray silty clayey fine grained sand		

Test Pit Cross Section and / or Plan View



REMARKS 8' x 7' x 16' long

Test pit located in northeastern area of landfill with linear sheet rock embankments.

PHOTO LOG Photo Z - View facing Southeast edge

TEST PIT 05-TP-06

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL

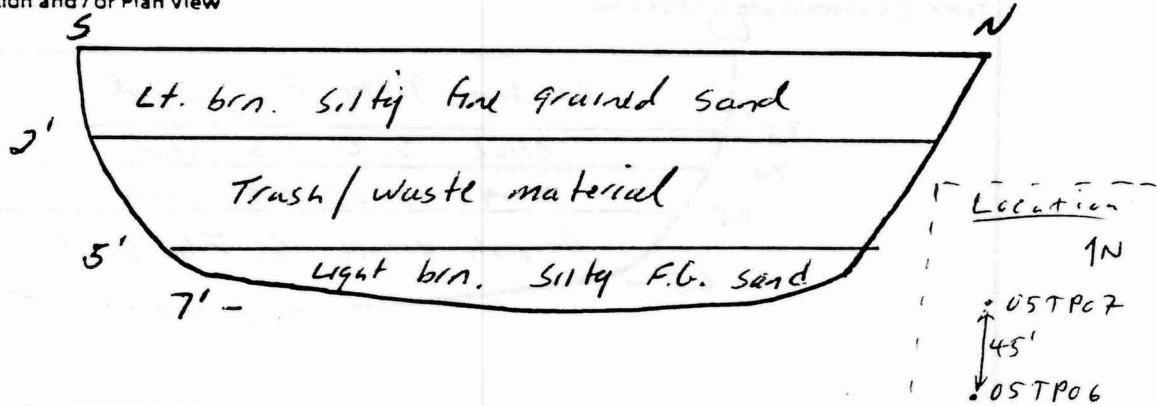
PROJECT NO. CTO - 289

LOCATION: Colts Neck, N.J.

FIELD GEOLOGIST. PAUL M. DAVIS

TEST FIT NO.: CS-T2-C7

Test Pit Cross Section and / or Plan View



REMARKS 2' x 7' x 8' long

Test plot located in northeastern area of Laurel Hill with - short grass club near northern Little Range.

PHOTO LOG

TEST PIT OS-TP-07

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLE

TEST PIT NO.: 05-TP-08

PROJECT NO.: CTO - 289

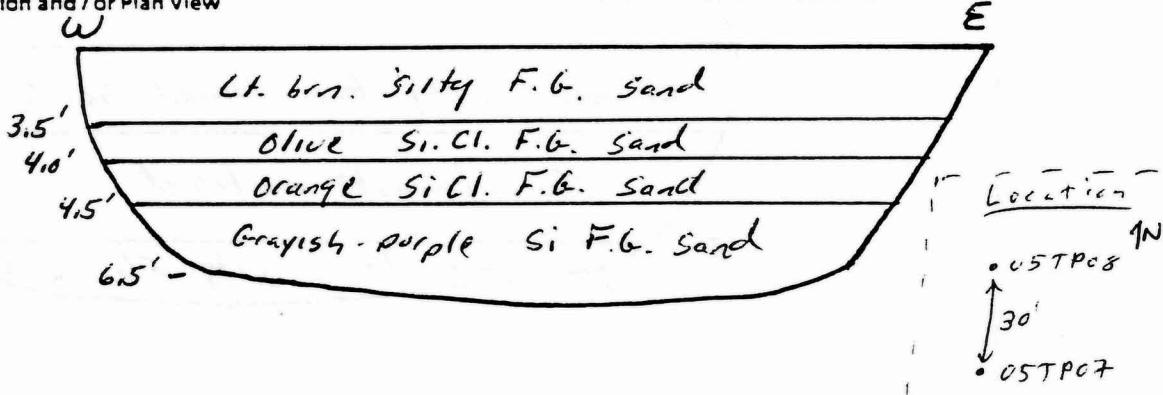
DATE: 6/23/97

LOCATION: Colts Neck, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		light brown silty fine grained sand		
3.5'		↓		
		Olive - silty clayey F.G. Sand		
4.0'				
		orange - silty clayey F.G. Sand		
4.5'				
		grayish-purple silty F.G. sand		
6.5'				

Test Pit Cross Section and / or Plan View



REMARKS 7' x 6.5' x 17' long

- No obvious trash/waste -

test pit is located outside of northeastern edge of landfill with structures of club near northern ridge. Vans.

PHOTO LOG

TEST PIT 05-TP-08

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: 05-TP-09

PROJECT NO. CTO - 289

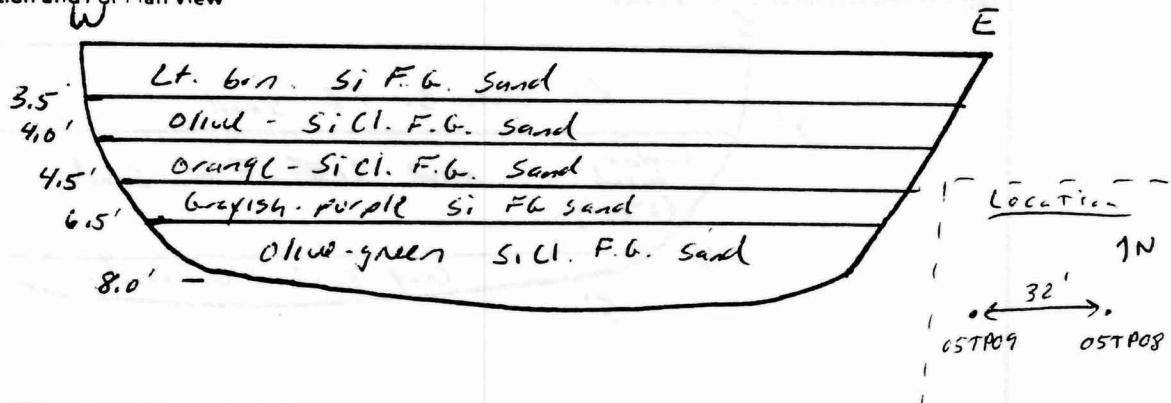
DATE: 6/23/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descrip.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
3.5'		Light brown silty fine grained sand		
4.0'		Olive - silty clayey fine grained sand		
4.5'		Orange - silty clayey F.G. sand		
6.5'		Grayish - purple silty F.G. sand		
8'		Olive green silty clayey fine grained sand		
		↓		

Test Pit Cross Section and/or Plan View



REMARKS 2' x 8' x 10' long - NO obvious trash/waste -

Test pit located outside of northern area of landfill at southern edge of R.F.C.S. property.

PHOTO LOG

TEST PIT 05-TP-09

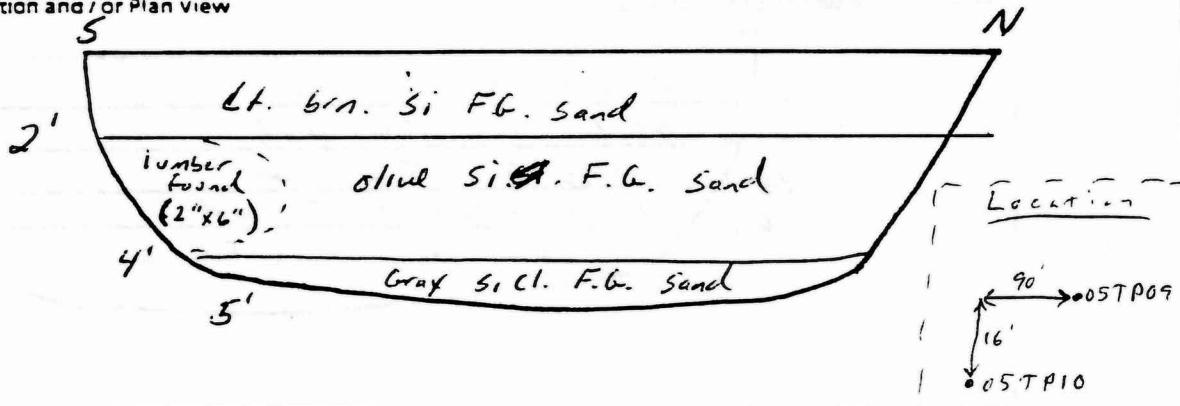
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARLE TEST PIT NO.: 05-TP-10
PROJECT NO. CTO - 289 DATE: 6/23/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 22' long

Test pit located in northern edge of land fill (north side of cleavers, far shooters club).

PHOTO LOG

TEST PIT 05-TP-10

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

TEST PIT NO.: 05-TP-11

PROJECT NO.: CTO - 289

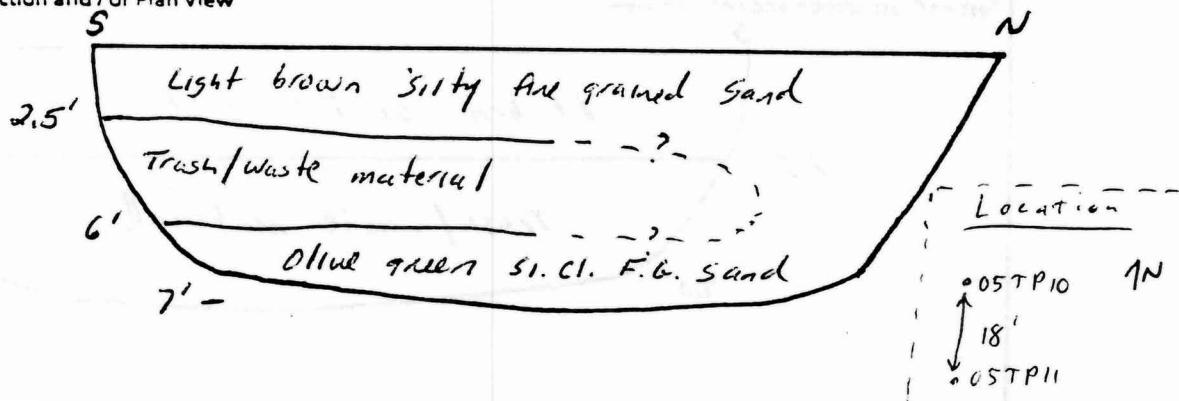
DATE: 6/23/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
2.5'		Trash/waste material - lumber, olive green Si.CI. FG Sand mix metal pallet, paper/plastic, glass, aluminum cans, glass		strong landfill odors
6'		Olive green silty clayey fine grained sand		
7'				

Test Pit Cross Section and/or Plan View



REMARKS 2' x 7' x 14' long

Test pit is located in northern central area/edge of landfill. (Northeast side of clearing, fur sheeters climb).

PHOTO LOG Photo 3

TEST PIT 05-TP-11

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: CS-TP-12

PROJECT NO. CTO - 289

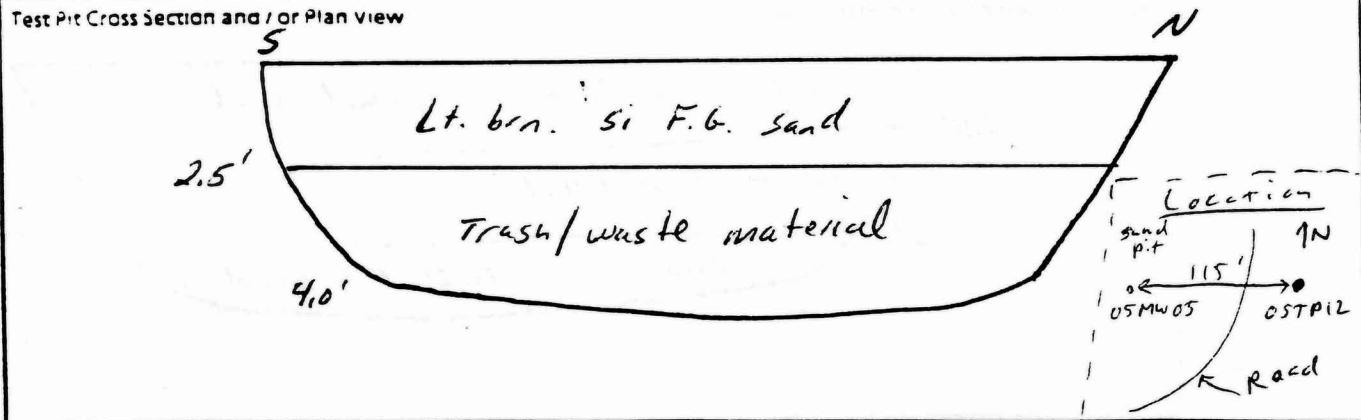
DATE: 6/23/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		light brown silty fine grained sand		
2.5'		↓		
		trash/waste material - mixed with olive green Si Cl. F.G. sand. metal pallet, burnt lumber, plastic sheeting, metal straps, lumber, NWS-Earle vehicle inspection Form dated 11/28/1972		A form dated 11/28/72 was found.
4.0'				

Test Pit Cross Section and / or Plan View



REMARKS 2' x 4' x 8' long

Test pit located in north central area of landfill near sand pit

PHOTO LOG

TEST PIT CS-TP-12

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO. CTO - 289

DATE: 6/23/97

TEST PIT NO.: 05-TP-13

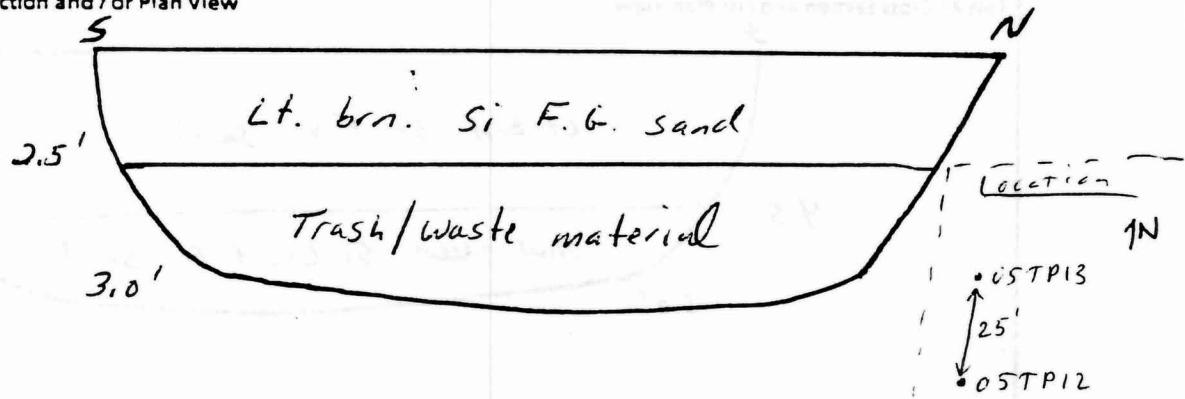
LOCATION: Colts Neck

DATE: //

FIELD OFFICE Page 11 D

FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3' x 6' long

Test pit is located in north central area of landfill near the sand pit

PHOTO LOG

TEST PIT 05-TP-13

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST FIT : O. : 05-TP-14

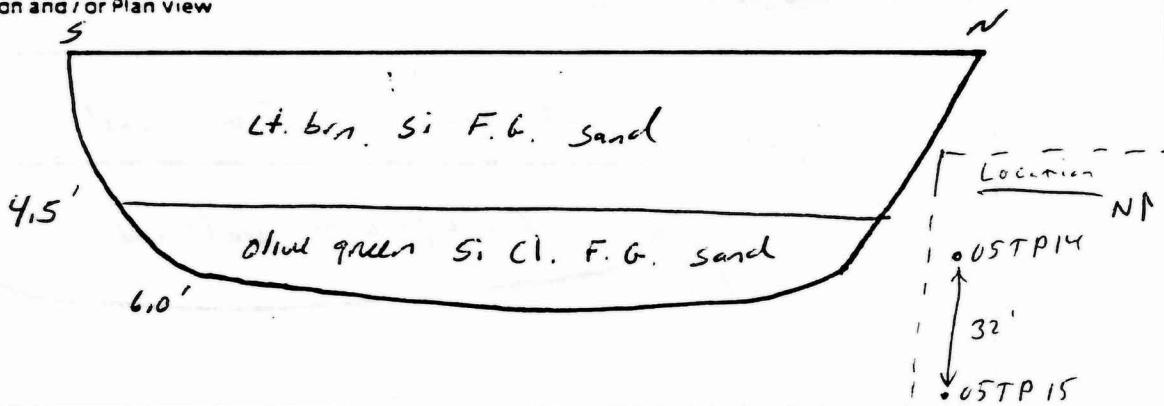
PROJECT NO CTO - 289

DATE: 6/23/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 6' x 8' long

- NO obvious trash/waste materials -

Test pit located outside of north central area of landfill near the S-nd pit ~~SE~~

PHOTO LOG

TEST PIT 05-TP-14

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARLE

TEST PIT NO.: 05-TP-15

PROJECT NO. CTO - 289

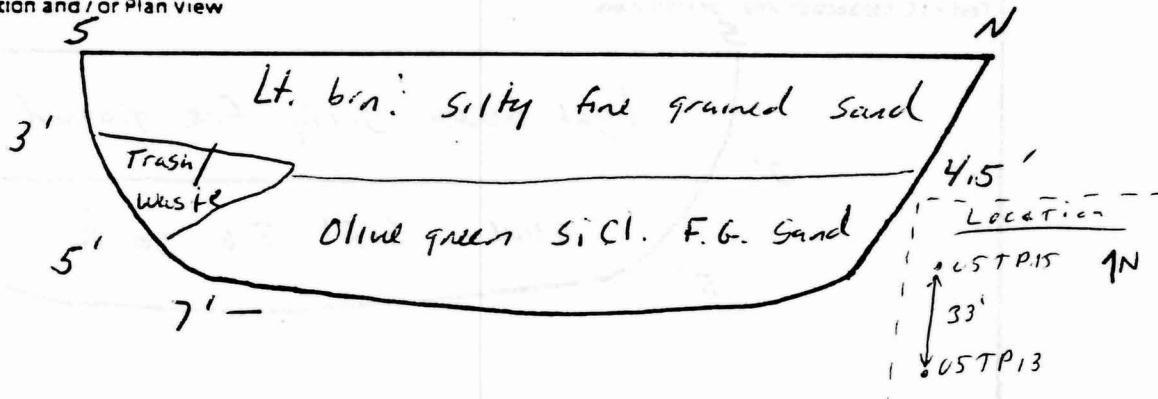
DATE: 6/23/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (DESCRIPT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained Sand		
3.0'		↓		
		Trash / waste material - (at southern end of test pit →) Some lumber and branches / logs .		
		Olive green silty clayey fine grained sand.		
7'		↓		

Test Pit Cross Section and/or Plan View



REMARKS 2' x 7' x 25' long

Test pit located in north central edge of land fill near the
Sand pit.

PHOTO LOG

TEST PIT 05-TP-15

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 35-TP-16

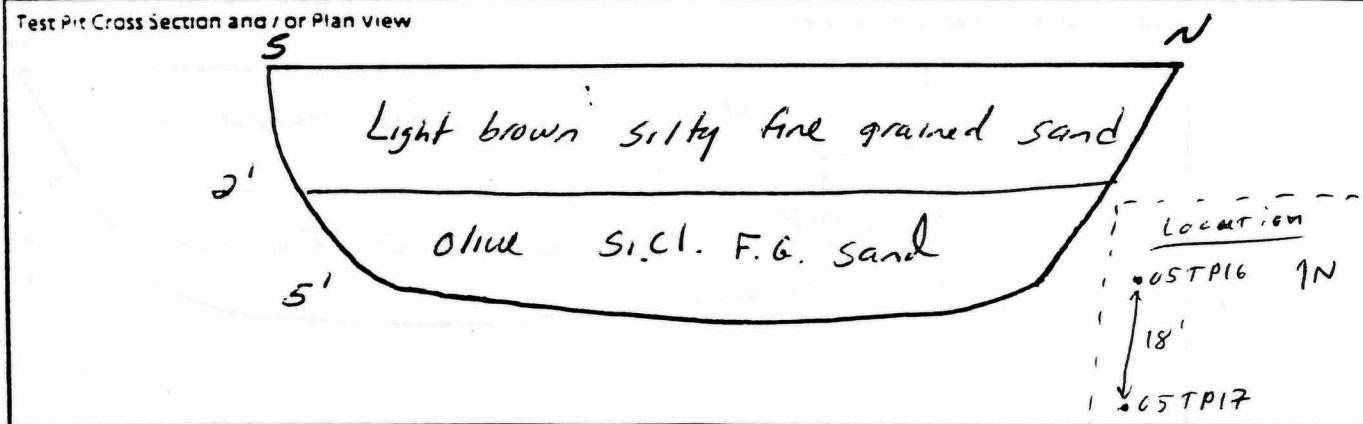
PROJECT NO. CTO - 289

DATE: 6/24/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 12' long

Test pit located outside of northwestern area of landfill along access road.

PHOTO LOG

TEST PIT Q5-TP-16

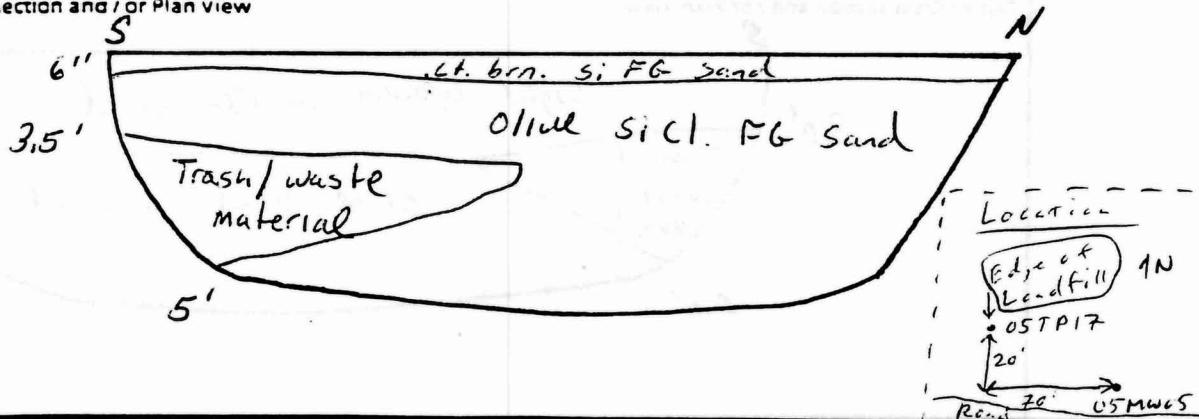
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL TEST PIT NO.: 05-TP
PROJECT NO. CTO - 289 DATE: 6/24/97
LOCATION: Colts Neck, NJ.
FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross section and / or Plan View



REMARKS 2' x 5' x 12' long

Test pit located at northwestern edge of land fill (north of dirt road)

PHOTO LOG

TEST PIT 05-TP-17

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL

TEST PIT NO.: 05-TP-18

PROJECT NO. CTO - 289

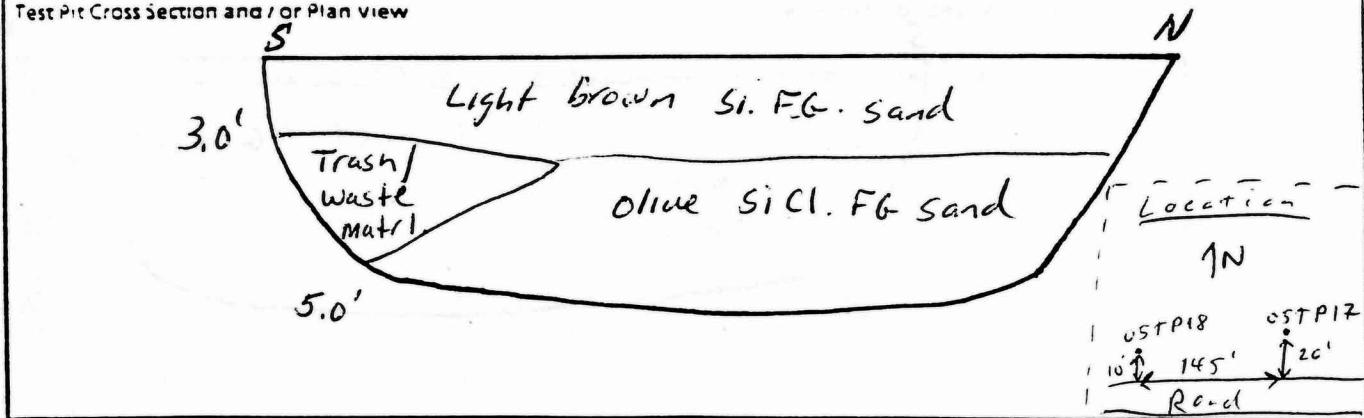
DATE: 6/24/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
3.0'		Olive silty clayey fine grained sand trash/waste material - paper, plastic, wood (lumber), styrofoam		trash at southern end of Test Pit, only
5'				

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 15' long

Test pit is located at north western edge of land fill

PHOTO LOG

TEST PIT 05-TP-18

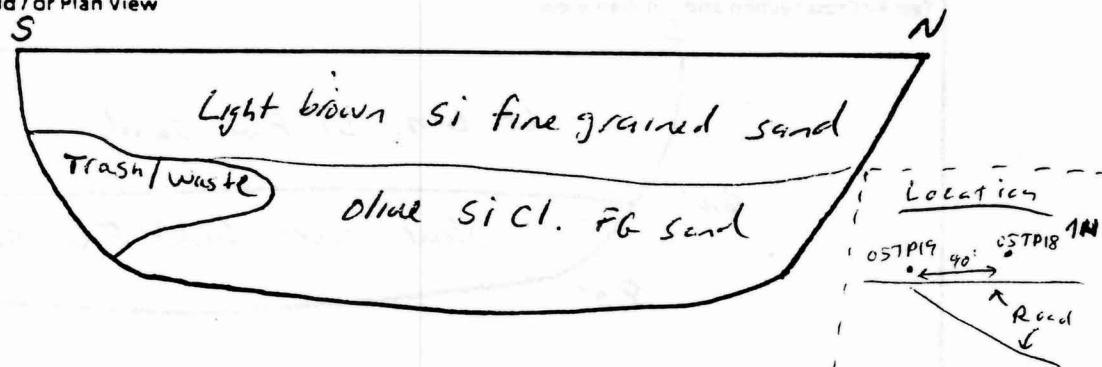
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL TEST PIT NO.: 05-TP-19
PROJECT NO. CTO - 289 DATE: 6/24/97
LOCATION: Colts Neck, NJ.
FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 5' x 12' long

Test pit located at north western edge of landfill (north of dirt rd.)

PHOTO LOG

TEST PIT 05-TP-19

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-20

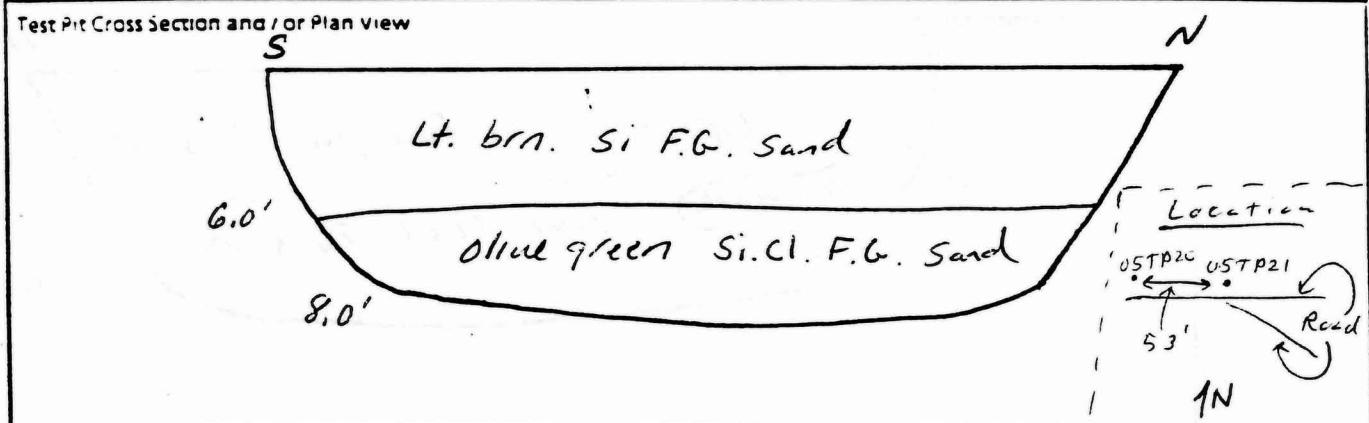
PROJECT NO. CTO - 289

DATE: 6/24/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2'x8'x14' long - NO trash/waste material -

Test pit located outside
on north western edge of landfill

PHOTO LOG

TEST PIT 05-TP-20

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

PROJECT NO.: CTO - 289

TEST PIT NO.: 05-TP-21

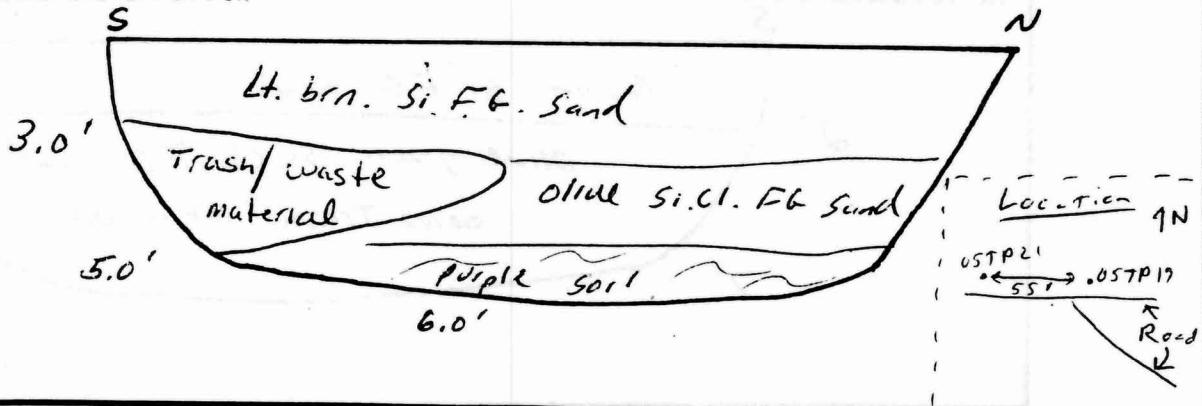
LOCATION: Colts Neck, NJ.

DATE: 6/24/97

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
3.0'		light brown silty fine grained Sand		waste material cut
		↓		southern end of test pit only -
		olive silty clayey fine grained Sand mixed with trash/waste material - lumber, metal straps, white powdered crystalline material in paper bags.		
5'		purple - disturbed soil		The white powder sub- stance was collected in a jar and given to Greg Coocert for possible chemical analysis.
		↓		

Test Pit Cross Section and / or Plan View



REMARKS 2'x 6'x 12' long

Test pit is located in northwestern edge of landfill (north of road).

PHOTO LOG

TEST PIT 05-TP-21

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLE

TEST PIT NO.: 05-TP-22

PROJECT NO.: CTO - 289

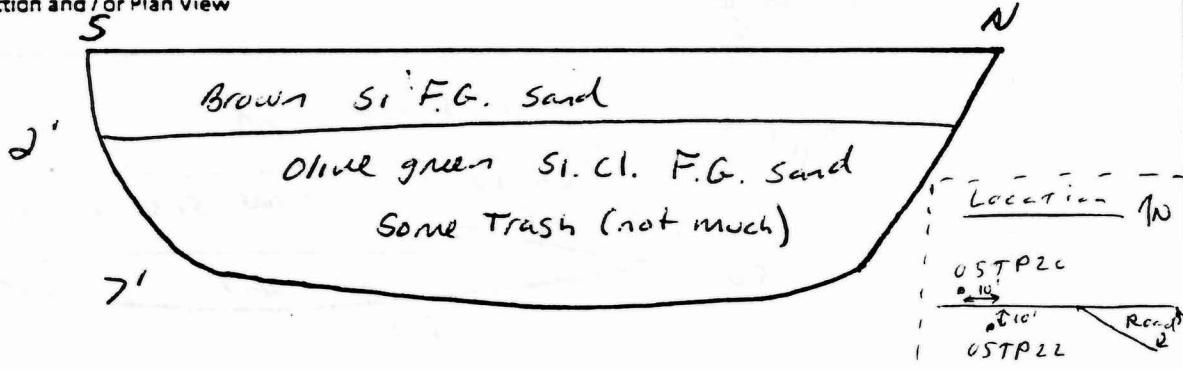
DATE: 6/24/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Brown silty fine grained sand		
2.0'		Olive green silty clayey fine grained sand		
		Some trash (not much) Succets Lozenges container, plastic, burnt lumber - olive green si, cl		
		Fine grained sand		
7'				

Test Pit Cross Section and/or Plan View



REMARKS

2'x7'x 11' long

Test Pit located near northwest area of landfill (SW of dirt rd; for

PHOTO LOG

TEST PIT 05-TP-22

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

PROJECT NO. CTO - 289

DATE. 6/24/97

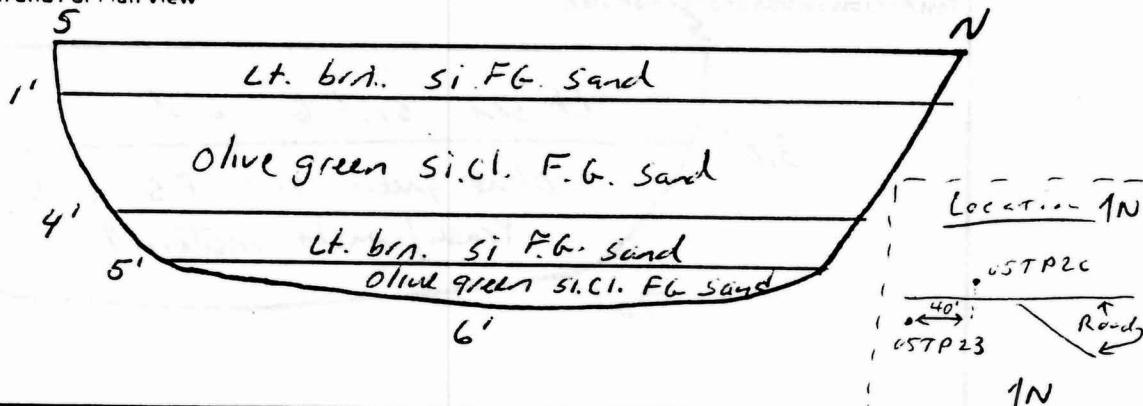
TEST PIT NO.: 05-TP-23

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
1'		Lt. Brown silty fine grained Sand ↓ Olive green silty clayey fine grained sand		
4'		Light brown silty F.G. Sand		
5'		Olive green silty clayey fine grained sand		
6'				

Test Pit Cross Section and / or Plan View



REMARKS 2'x6'x10' long. —NO obvious trash/waste—

TEST PIT located outside of NW section of landfill

PHOTO LOG

TEST PIT 05-TP-23

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: 05-TP-24

PROJECT NO. CTO - 289

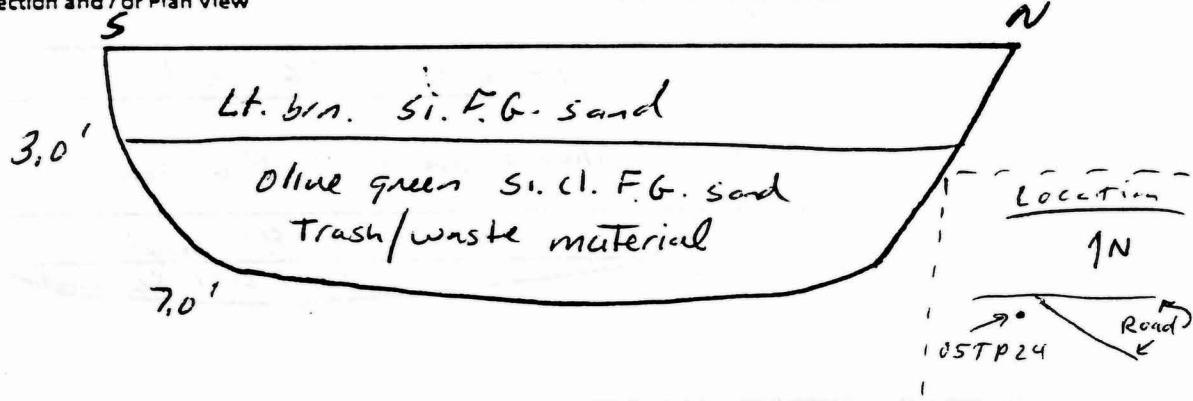
DATE: 6/24/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Description)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
3.0'		Light Brown Silty fine grained sand		
		↓		
7.0'		Olive green Silty clayey fine grained sand - Trash/waste material - lumber, metal straps, plastic, paper, wrought iron Chair		

Test Pit Cross Section and/or Plan View



REMARKS 2'x 7'x 10' long

Test Pit located in northwest area of landfill (sw of fork)

PHOTO LOG

TEST PIT 05-TP-24

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: *NWS - EARL*

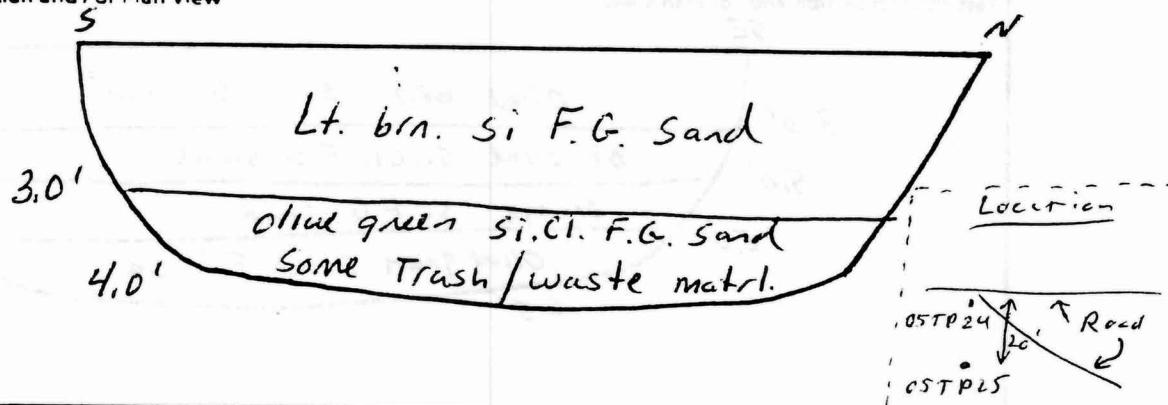
PROJECT NO. CTO - 289

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST. PAUL M. DAVIS

TEST PIT NO.: 45-TP-25

Test Pit Cross Section and / or Plan View



REMARKS 2' x 4' x 10' long

Test pit located in northwest area of land 611

PHOTO LOG

TEST PIT 05-TP-25

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLE

TEST PIT NO.: 05-TP-26

PROJECT NO.: CTO - 289

DATE: 6/24/97

LOCATION: COLTS NECK, N.J.

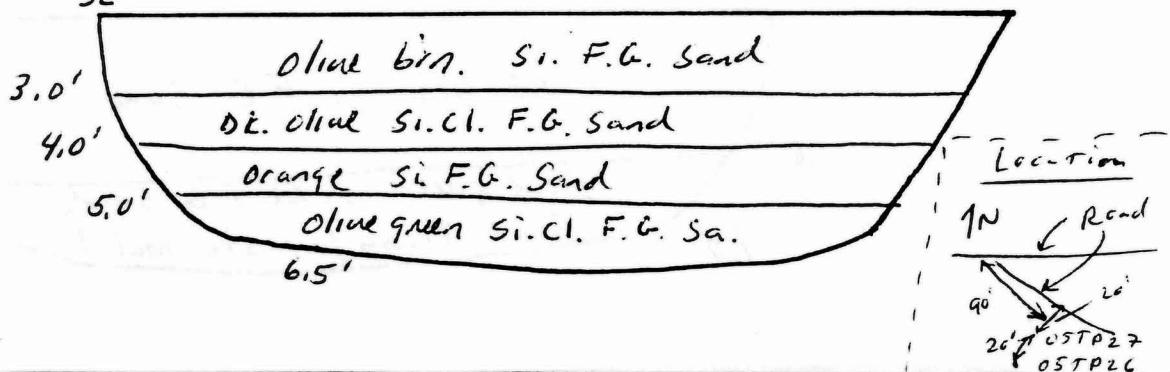
FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
3.6'		olive brown - silty fine grained sand		
4.0'		dark olive silty clayey fine grained sand		
5.0'		orange silty fine grained sand		
6.5'		olive green silty clayey fine grained sand.		

Test Pit Cross Section and/or Plan View

SE

NW



REMARKS 2' x 6.5' x 9' long - NO obvious trash/waste -

TEST PIT located outside of northwest area of landfill.

PHOTO LOG

TEST PIT 05-TP-26

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO. CTO - 289

DATE: 6/24/97

TEST PIT NO.: 05-TP-27

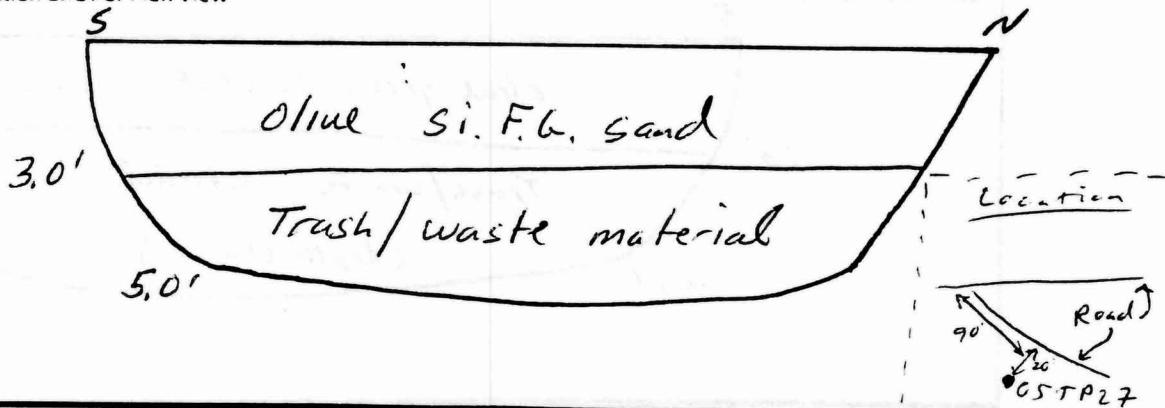
PROJECT NO. 287
LOCATION: Colgate

DATE: 6/27/91

LOCATION: Colts Neck, N.J.

FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 5' x 9' long

Test Pit is located in western area of Landfill

PHOTO LOG Photo # 4

TEST PIT OS-TP-27

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLF

TEST PIT NO.: 05-TP-28

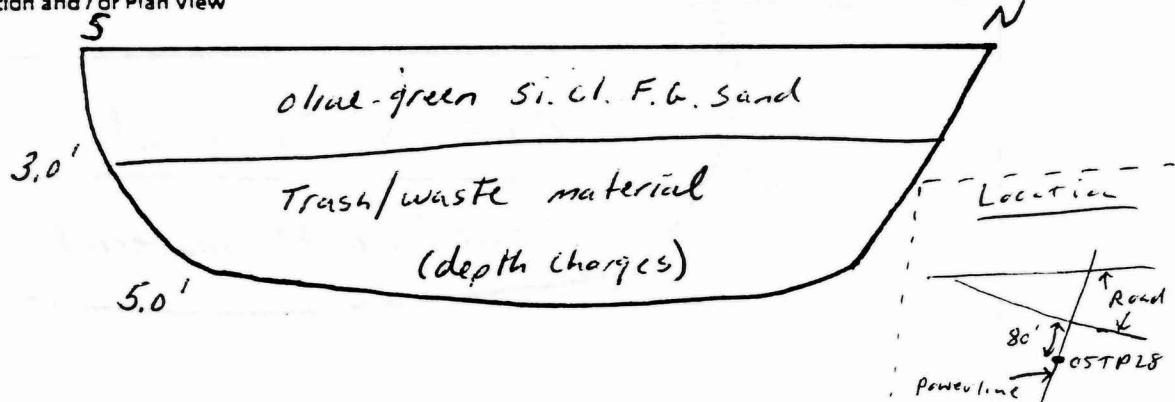
PROJECT NO. CTO - 289

DATE: 6/24/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 9' long

Test Pit located in western area of landfill (in tree clearing path)
(Power line)

PHOTO LOG Photo's 5 and 6.

TEST PIT OS-TP-28

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

TEST PIT NO.: OS-TP-29

PROJECT NO. CTO - 289

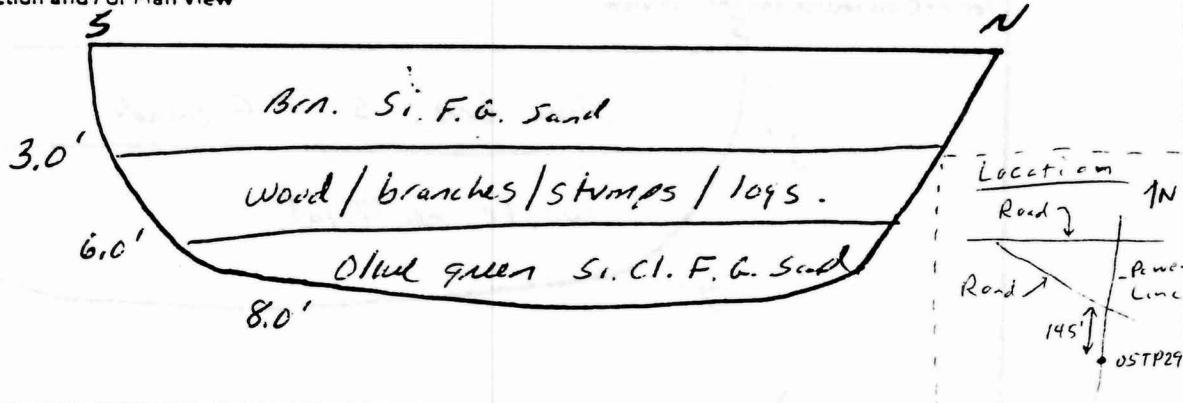
DATE: 6/24/97

LOCATION: Colts Neck, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (DESCRIPT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Brown silty fine grained sand		
3.0'		waste material - wood, branches, stumps, logs mixed with gray-black silty fine grained sand		No trash/garbage
6.0'		Olive green silty clayey fine grained sand		
8.0'				

Test Pit Cross Section and/or Plan View



REMARKS 2' x 8' x 11' long

Test pit located in western edge of landfill (in tree clearing path)
(Power line crossing)

PHOTO LOG

TEST PIT OS-TP-29

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

TEST PIT NO.: 05-TP-30

PROJECT NO.: CTO - 289

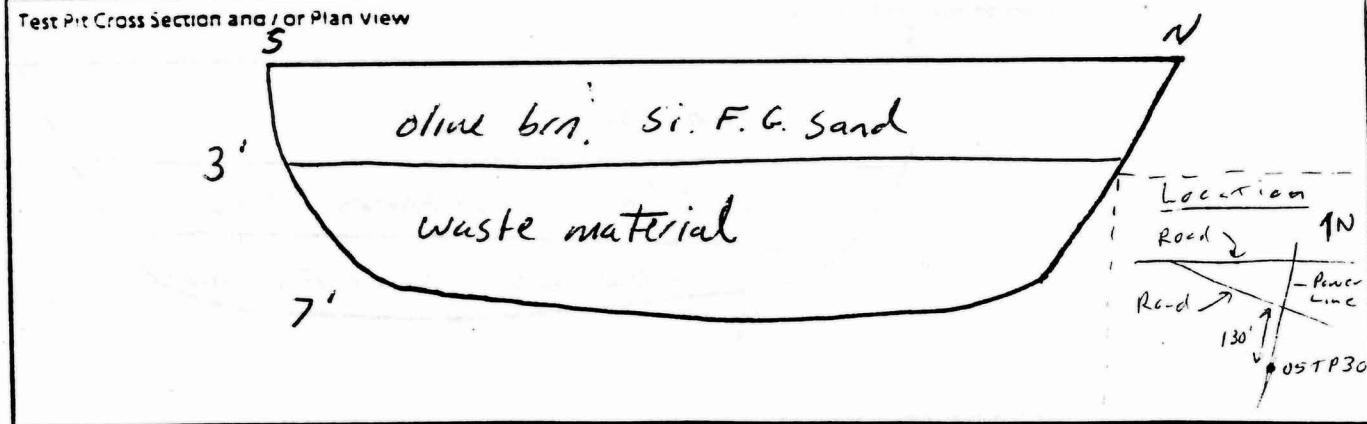
DATE: 6/24/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Degraded)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
3.0'		olive brown silty fine grained sand ↓		Landfill colors
7.0'		Olive green silty clayey fine grained sand - waste material - branches, logs, stumps, plastic sheeting & lumber		

Test Pit Cross Section and / or Plan View



REMARKS 2'x7'x10' long

Test Pit located in western area of landfill (in tree clearing area)
(Power line clearing).

PHOTO LOG

TEST PIT 05-TP-30

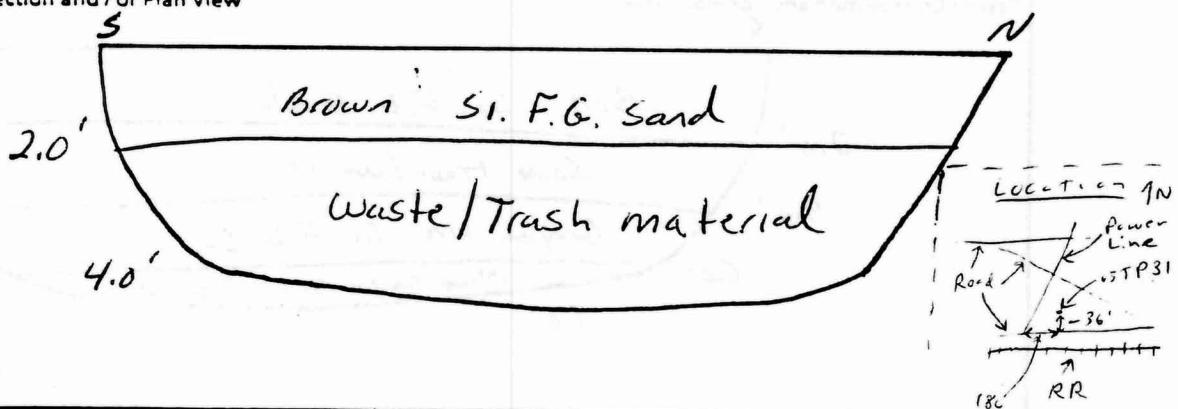
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL TEST PIT NO.: 05-TP-31
PROJECT NO. CTO - 289 DATE. 6/24/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 3' x 4' x 8' long
located along abandoned road parallel to railroad tracks.

PHOTO LOG

TEST PIT OS-TP. 31

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PROJECT: NWS-EARL

TEST PIT NO.: 05-TP-32

PROJECT NO.: CTO - 289

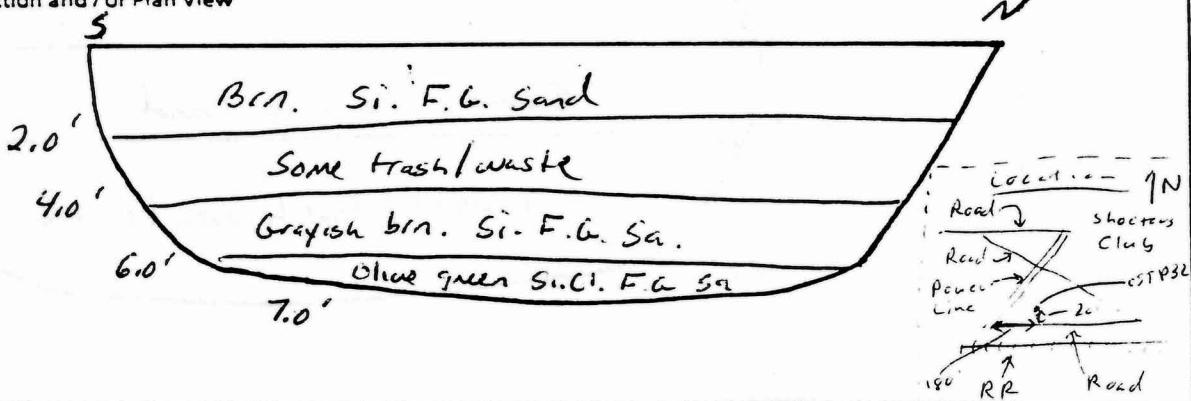
DATE: 6/24/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Brown silty fine grained sand		
2.0'				
4.0'		Some metal straps (debris)		
6.0'		Grayish brown silty fine grained sand		
7.0'		Olive green silty clayey fine grained sand		

Test Pit Cross Section and / or Plan View



REMARKS 2' x 7' x 10' long

Located along abandoned road parallel to railroad tracks.

PHOTO LOG

TEST PIT 05-TP-32

PAGE 6 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO. 05-TP-33

PROJECT NO. CTO - 289

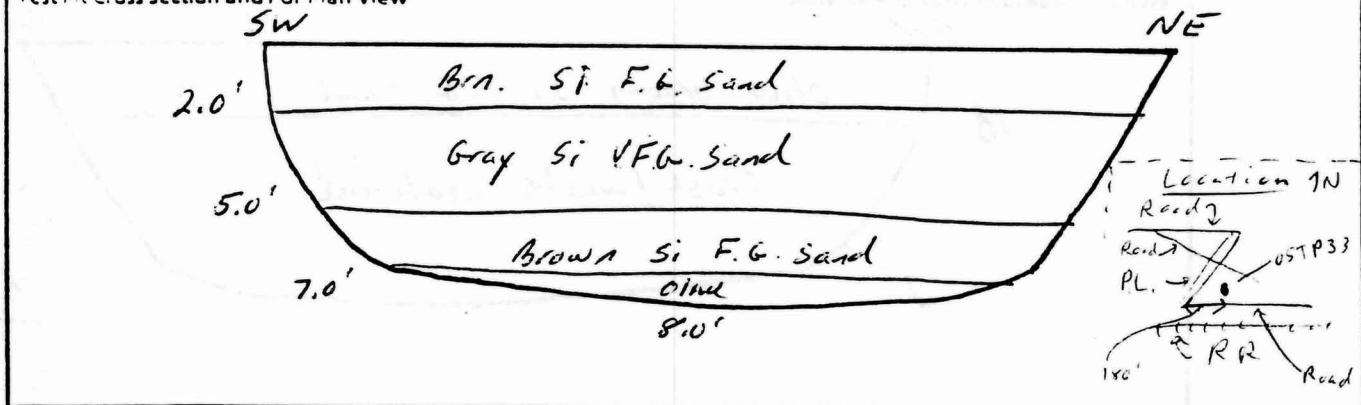
DATE: 6/24/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (DEGRN.FL.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Brown Silty fine grained sand		
2.0'		Gray silty very fine grained sand		
5.0'		Brown silty fine grained sand		
7.0'		Olive green silty clayey fine grained sand.		

Test Pit Cross Section and / or Plan View



REMARKS 2' x 8' x 12' long - NO obvious waste - Located along abandoned road parallel to the railroad tracks.

PHOTO LOG

TEST PIT 05-TP-33

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST FIT I.D.: 05-TP-34

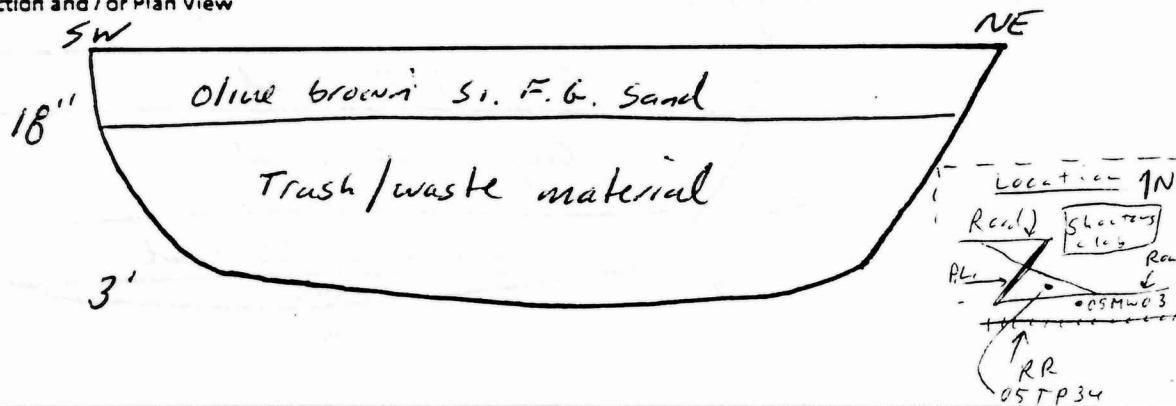
PROJECT NO CTO - 289

DATE: 6/24/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS $2' \times 3' \times 10'$ long

located along the abandoned road parallel to the railroad tracks.

PHOTO LOG Photo #7

TEST PIT OS-TP-34

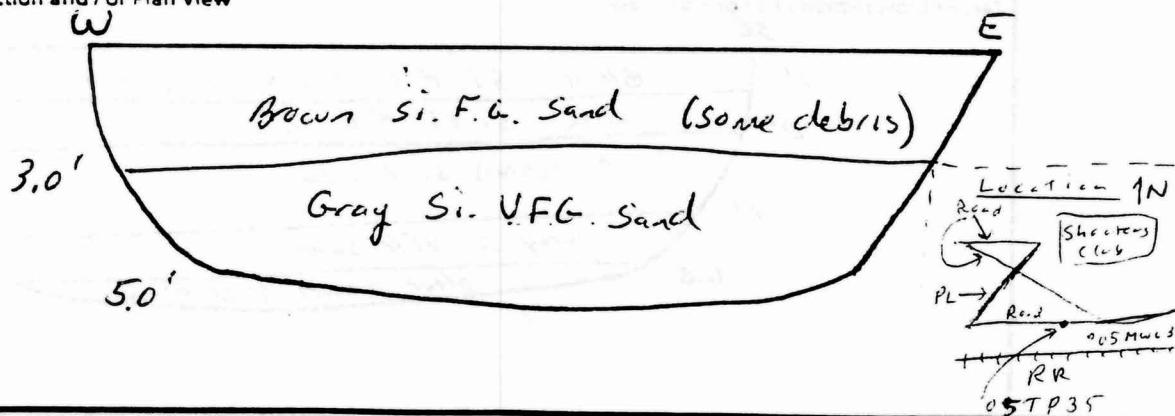
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL TEST PIT NO.: 05-T
PROJECT NO. CTO - 289 DATE: 6/24/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 9' long

Located with an abandoned road parallel to the railroad tracks.

PHOTO LOG

TEST PIT OS-TP-35

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

TEST PIT NO.: CS-TP-36

PROJECT NO.: CTO - 289

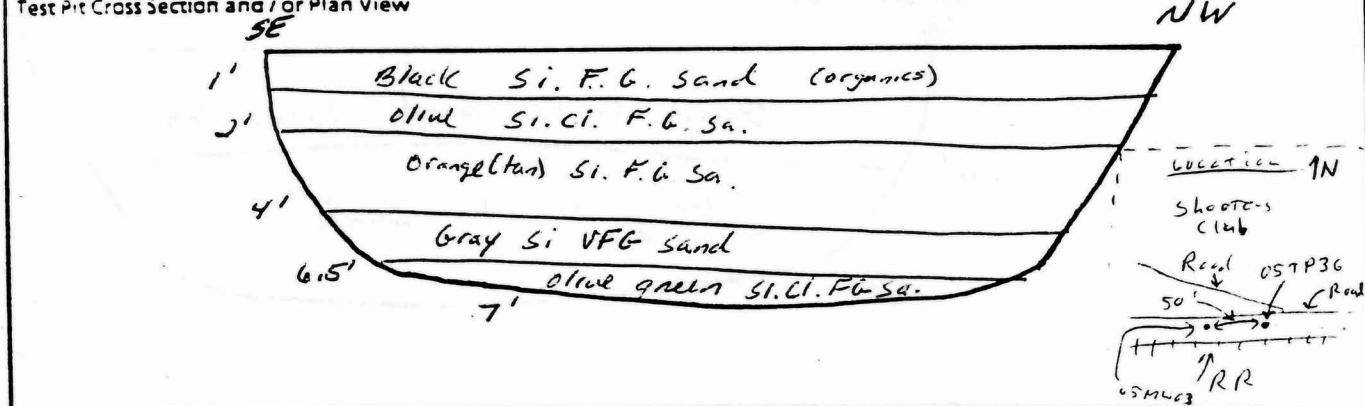
DATE: 6/25/97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Deposit)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
1'		Black Silty fine grained Sand (organics)		
2'		Olive silty clayey fine grained sand		
3'		Orange(tan) silty fine grained sand		
4'		Gray silty very fine grained sand		
6.5'		Olive green silty clayey fine grained sand		
7'				

Test Pit Cross Section and / or Plan View



REMARKS 2'X 7'X 10' long - NO obvious waste or trash -

Test pit located outside of the southwestern edge of land fill.
Near OSMWC3 along a bordered rd.

PHOTO LOG Photo #8

TEST PIT O5-TP-36

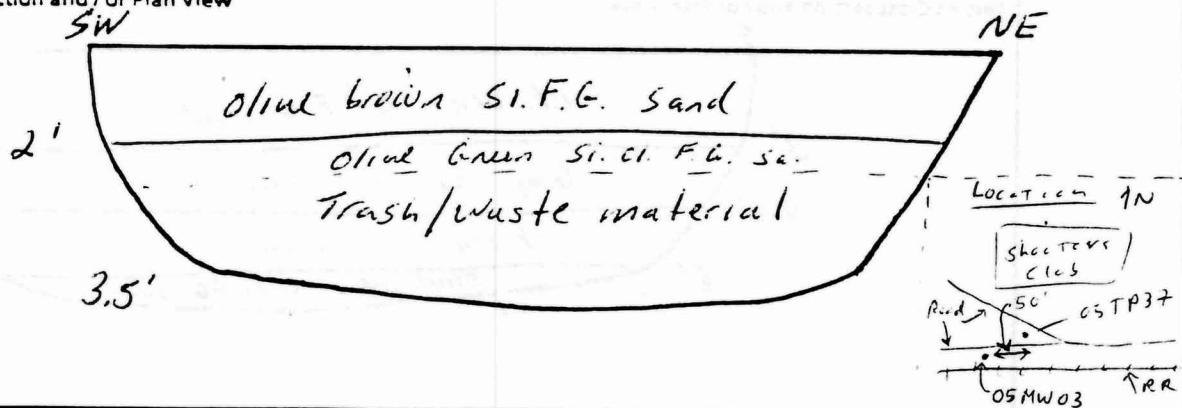
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARLE TEST PIT NO.: C5-TP-37
PROJECT NO. CTO - 289 DATE: 6-15-97
LOCATION: COLTS NECK, N.J.
FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 3.5' x 8' long

Test pit located in SW area of landfill. Exact CSMW#3.

PHOTO LOG Photo #9

TEST PIT 05-TP-37

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: 05-TP-38

PROJECT NO. CTO - 289

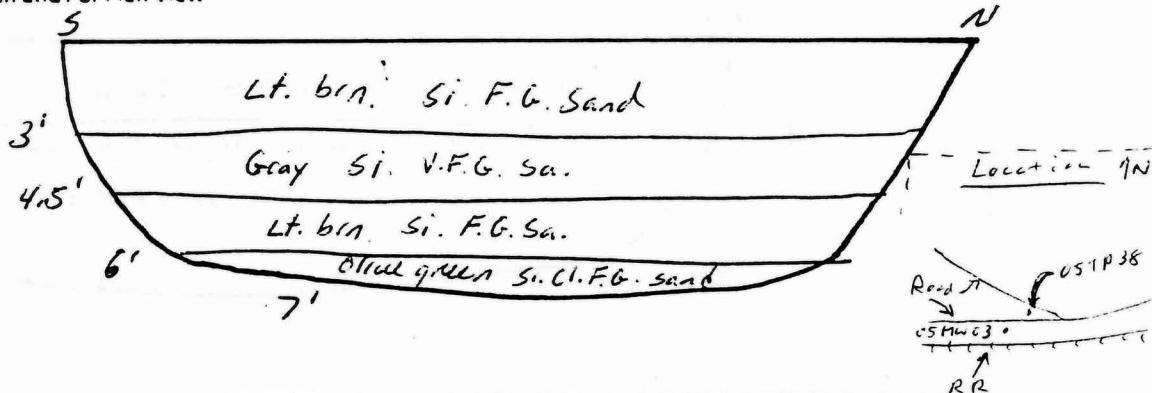
DATE: 6-25-97

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descrip. Pl.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		light brown silty fine grained sand		
3'				
4.5'		Gray silty very fine grained sand		
6'		light brown silty fine grained sand		
7'		olive green silty clayey fine grained sand		

Test Pit Cross Section and/or Plan View



REMARKS 2' x 7' x 15' long - no obvious waste or trash -

Test pit is located outside of southern boundary of land fill.

PHOTO LOG

TEST PIT 05-TP-38

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO.: CTO - 289

DATE: 6/25/97

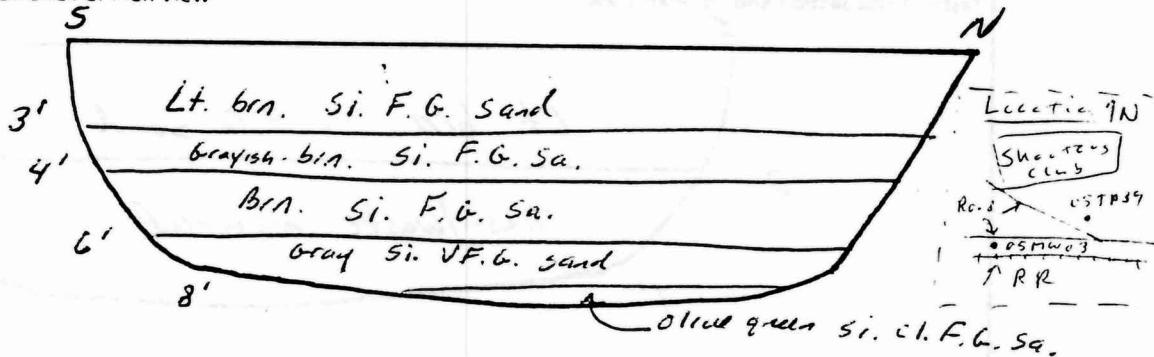
TEST PIT NO.: 05-TP-39

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
3'				
4'		Grayish-brown silty fine grained sand		
		Brown silty fine grained sand		
6'		Gray silty very fine grained sand		
8'		Olive green silty clayey fine grained sand		

Test Pit Cross Section and/or Plan View



REMARKS 2' x 8' x 10' long - NO OBVIOUS WASTE/TRASH -

PHOTO LOG

TEST PIT 05-TP-39

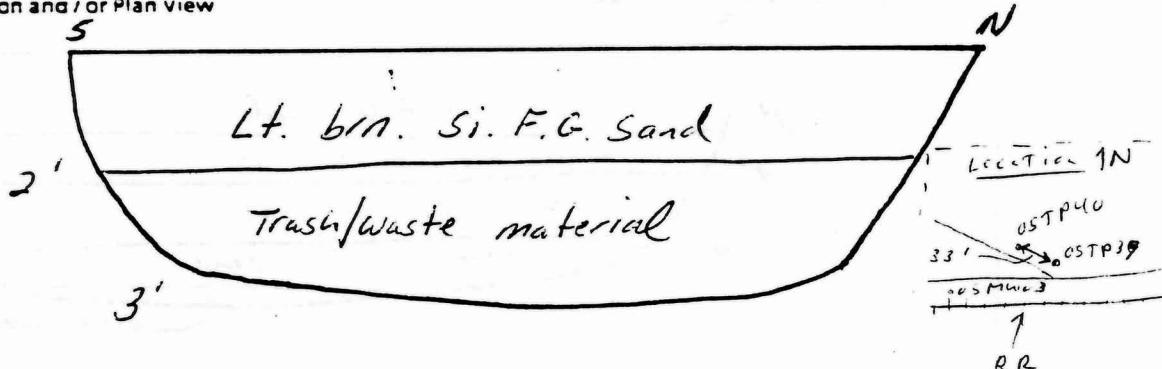
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARLE TEST PIT NO.: 05-TP-40
PROJECT NO. CTO - 289 DATE: 6/25/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3' x 9' long

PHOTO LOG Photo # 10

TEST PIT 05-TP-40

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO.: CTO - 289

DATE: 6/25/97

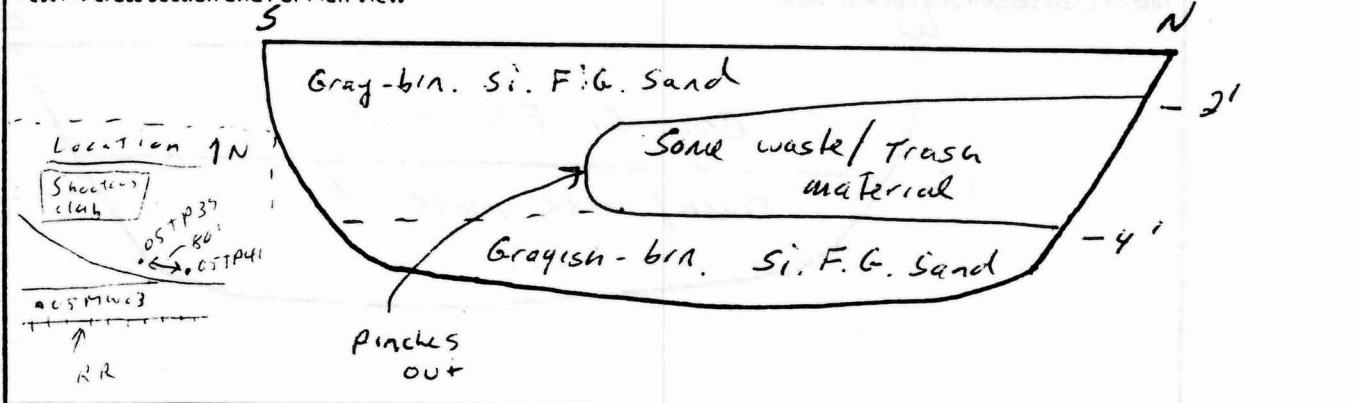
TEST PIT NO.: 05-TP-41

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descrip.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		grayish-brown silty fine ground sand		
2'		waste/trash material - wood, logs, branches, some paper & plastic, a bowling pin		
4'		grayish-brown silty fine ground sand		
7'				

Test Pit Cross Section and/or Plan View



REMARKS 2' x 7' x 10' long

TEST pit located in southern edge of landfill

PHOTO LOG

TEST PIT 05-TP-41

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-42

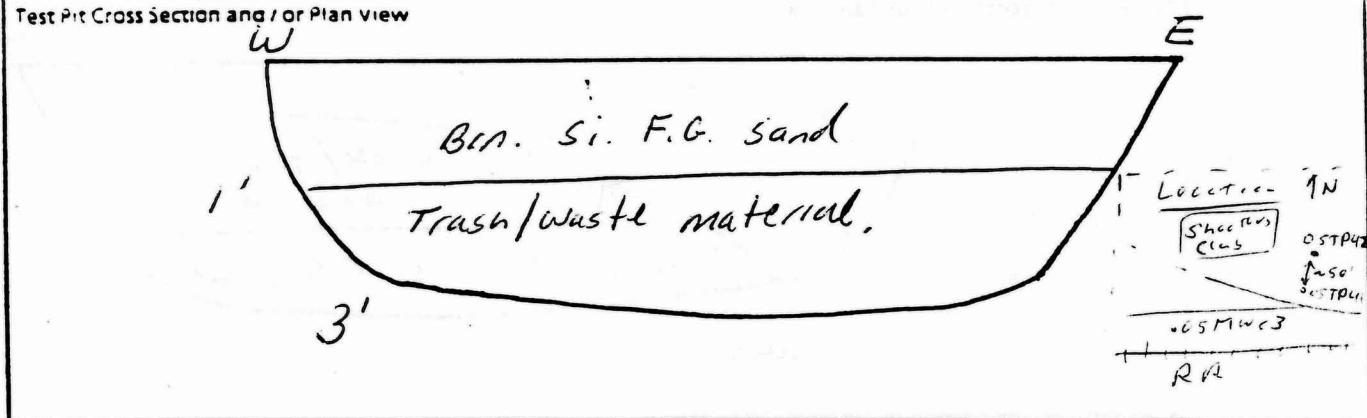
PROJECT NO. CTO - 289

DATE: 6/25/97

LOCATION: Colts Neck, N.J.

FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3' x 9' long Test pit located in "wetland" area

Test pit located in southeastern area of landfill.

PHOTO LOG Photo #11

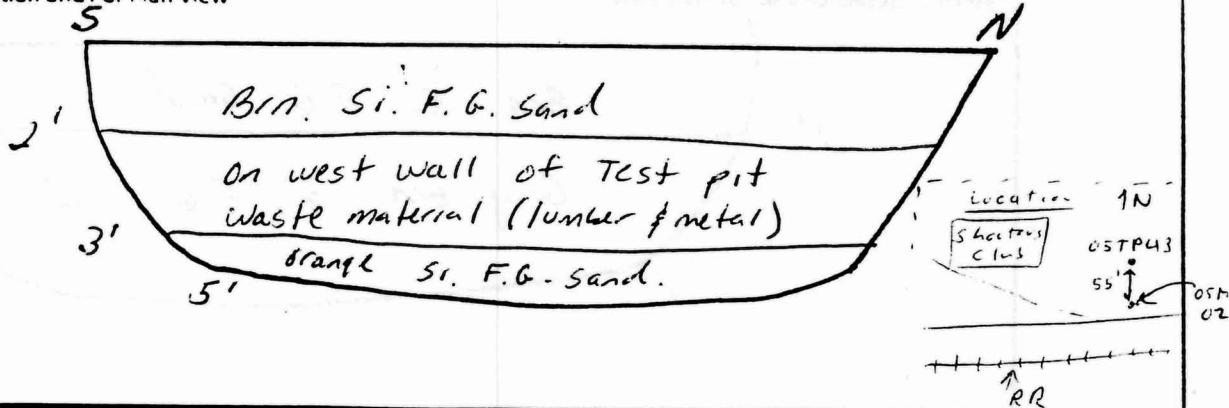
TEST PIT 05-TP-42

PAGE / OF /

PROJECT: **NWS - EARL** TEST PIT NO.: **05-TP-43**
 PROJECT NO. **CTO - 289** DATE: **6/25/97**
 LOCATION: **Colts Neck, NJ.**
 FIELD GEOLOGIST: **PAUL M. DAVIS**

DEPTH (ft.)	LITHOLOGY CHANGE (DEGR.FT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
2'		Brown silty fine grained sand		
		↓		
		Gray silty very fine grained Sand - On west wall of Test pit		
		waste material - lumber & metal debris		
3'		orange silty fine grained sand.		
5'				

Test Pit Cross Section and/or Plan View



REMARKS **2' x 5' x 10' long**

Waste material along west wall of test pit.
Test pit located in SE edge of landfill.

PHOTO LOG

TEST PIT **05-TP-43**

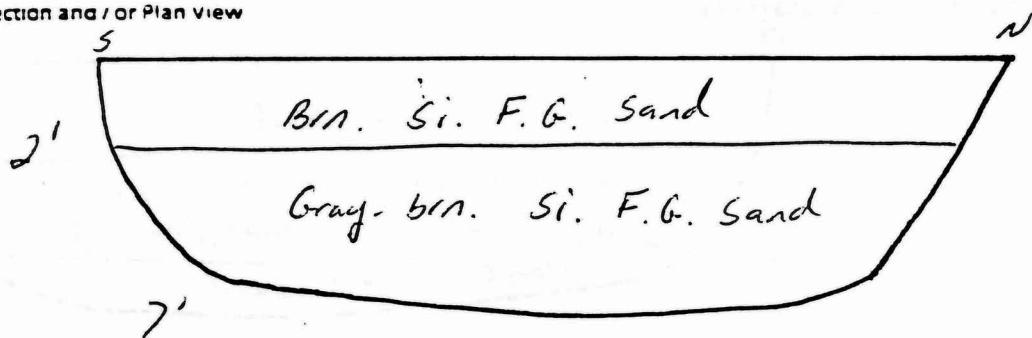
PAGE **1 OF 1**

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARLE TEST PIT NO.: 05-TP-44
PROJECT NO. CTO - 289 DATE: 6/25/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS ~~2' x 7' x 7' long~~ = no obvious water fast.

Test pit located outside of south eastern edge of landfill.

PHOTO LOG

TEST PIT 05-TP-44

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

PROJECT NO. CTO - 289

LOCATION: COLTS NECK, N.J.

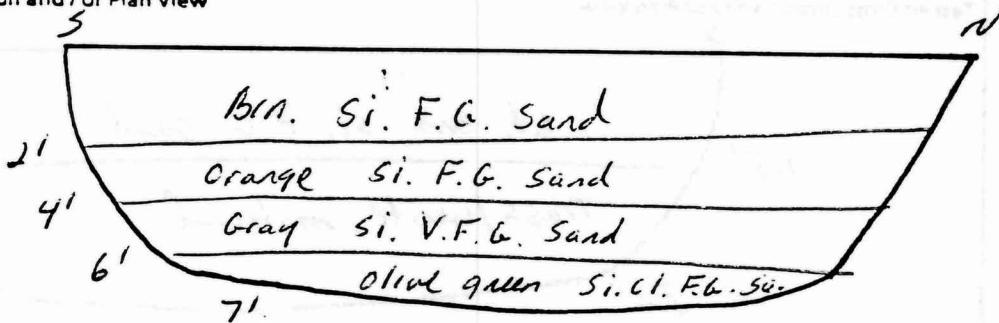
FIELD GEOLOGIST: PAUL M. DAVIS

TEST PIT NO. 05-TP-45

DATE: 6/25/97

DEPTH (ft.)	LITHOLOGY CHANGE (DEGRN.FT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Brown silty fine grained sand		
2'		↓		
		Orange silty fine grained sand		
		↓		
4'		Gray silty very fine grained sand		
		↓		
6'		Olive green silty clayey fine grained sand		
7'				

Test Pit Cross Section and/or Plan View



REMARKS 2' x 7' x 8' long - NO obvious waste or trash -

PHOTO LOG

TEST PIT 05-TP-45

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO. CTO - 289

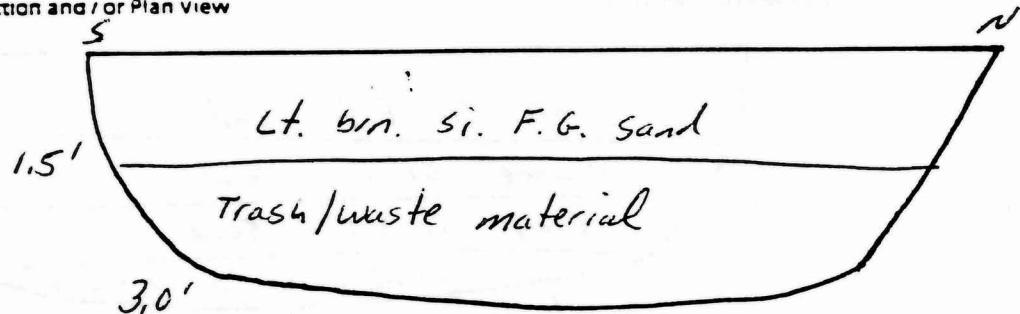
DATE: 6/25/97

TEST PIT NO.: 05-TP-46

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 3' x 8' long

PHOTO LOG Photo #12

TEST PIT 05-TP-46

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TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

PROJECT NO. CTO - 289

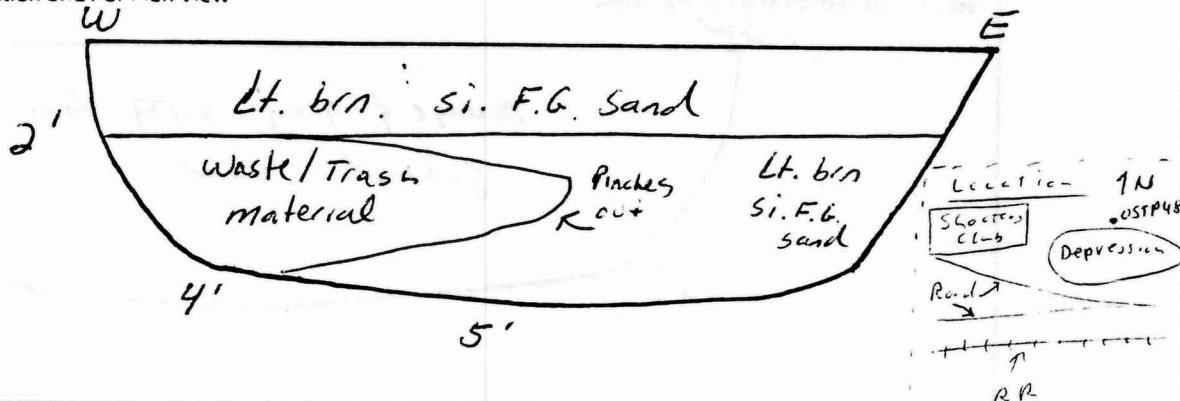
LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST. PAUL M. DAVIS

TEST PIT NO.: 05-TP-48

DEPTH (ft.)	LITHOLOGY CHANGE (Descrip.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
2'		Light brown silty fine grained sand		
3'		waste/trash material - wood, lumber, metal, paper, plastic, fabric... (ON west side of) test pit, only		
5'		Light brown silty fine grained sand		

Test Pit Cross Section and/or Plan View



REMARKS

2' x 5' x 20' long

Located north of the existing depression

PHOTO LOG

TEST PIT 05-TP-48

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TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS - EARL

TEST NO. 5: 05-TP-49

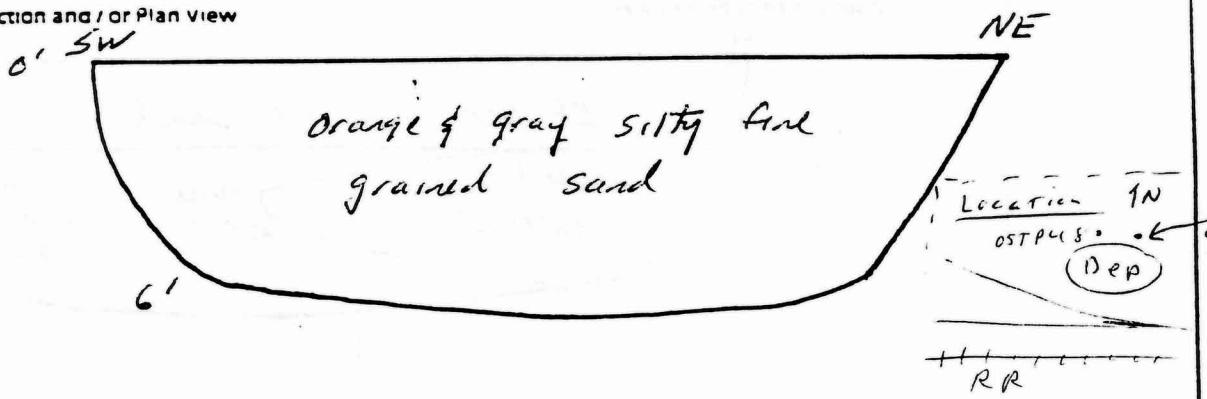
PROJECT NO. CTO - 289

DATE: 6/25/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and/or Plan View



REMARKS 2' x 6' x 10' long - no obvious waste/trash - Located next to large tree existing depression.

PHOTO LOG

TEST PIT 65-TP-49

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

PROJECT NO. CTO - 289

DATE: 6/25/97

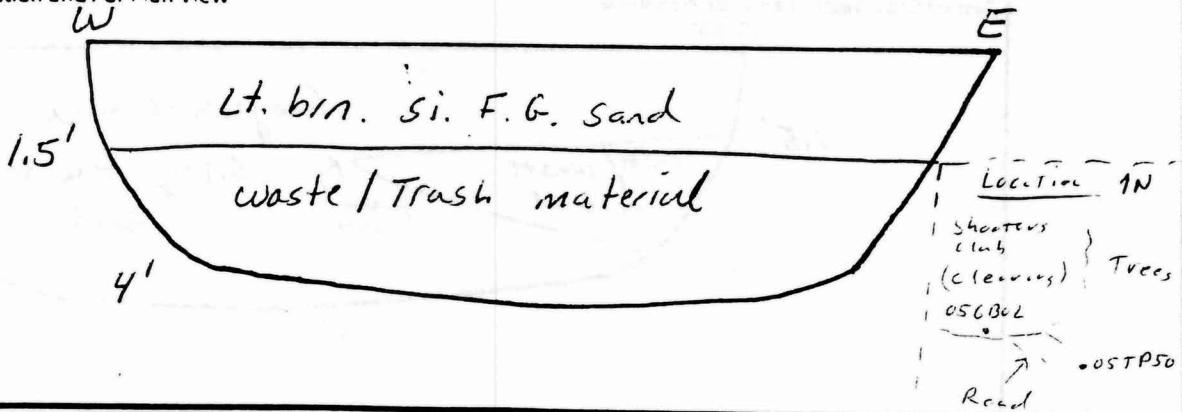
TEST PIT I.D.: 05-TP-50

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (DESCRIPT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
1.5'		Waste/Trash material - 55-gal. drum filled with garbage and electrical equipment, lumber, paper, plastic, glass and general trash.		
4'				

Test Pit Cross Section and / or Plan View



REMARKS 2'X4'X10' long

Located in the cleared area S.E. of sketch curb clearing.

PHOTO LOG Photo #13

TEST PIT 05-TP-50

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-51

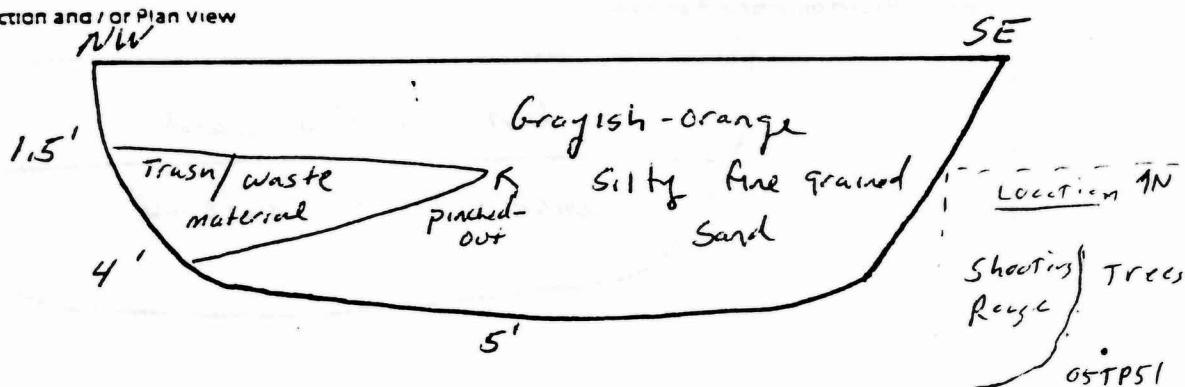
PROJECT NO. CTO - 289

DATE: 6/25/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 22' long

PHOTO LOG Photo # 14

TEST PIT 05-TP-50

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

TEST PIT NO.: 05-TP-52

PROJECT NO.: CTO - 289

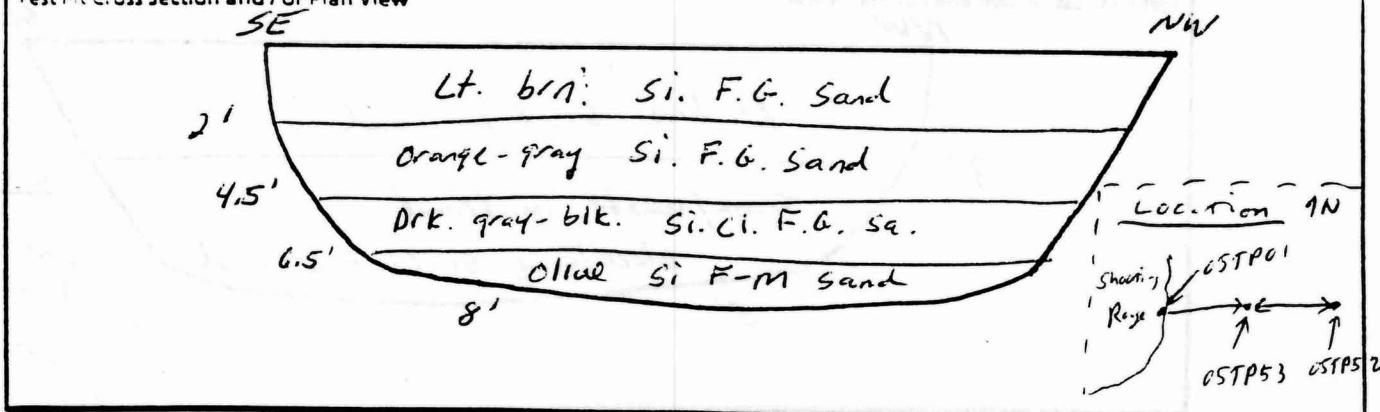
DATE: 6/25/87

LOCATION: COLTS NECK, N.J.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descrip.tn.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand.		
2'		Orange-gray silty fine grained sand		
4.5'		Dark grayish-black silty clayey fine grained sand		
6.5'		Olive silty fine to medium grained sand		
8'				

Test Pit Cross Section and/or Plan View



REMARKS

2' x 8' x 10' long

- No obvious waste/trash -

PHOTO LOG

TEST PIT 05-TP-52

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO. 05-TP-53

PROJECT NO. CTO - 289

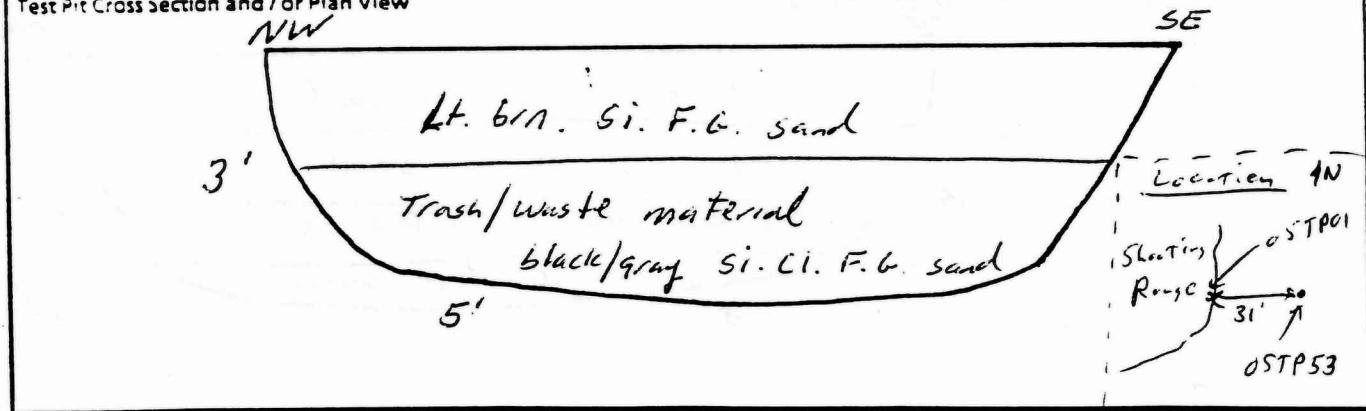
DATE. 6/25/57

LOCATION. COLTS NECK, NJ.

FIELD GEOLOGIST. PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
3'		↓		
		Trash / waste material - lumber, paper, plastic, metal debris, tin cans		January 1968 stained on plastic bag.
		Black - gray silty clayey fine grained sand.		
5'				

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 15' long

PHOTO LOG Photo #15

TEST PIT 05-TP-53

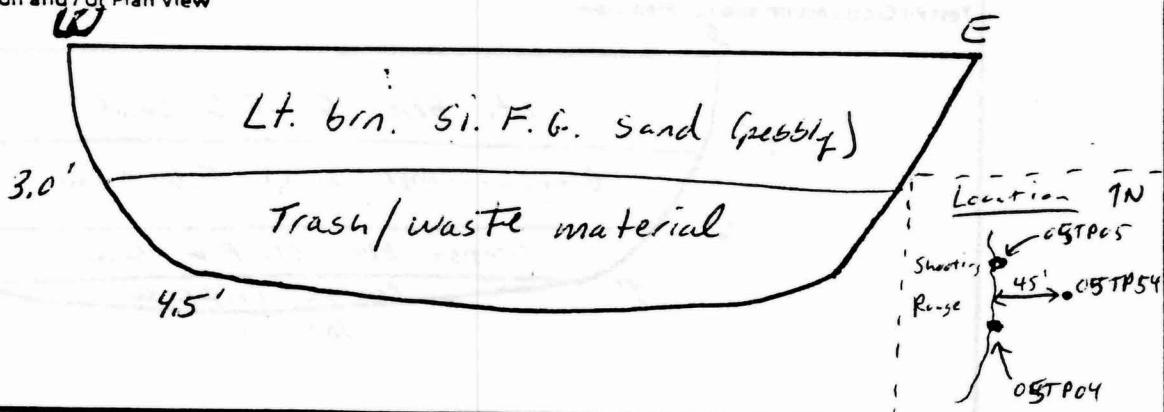
PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL TEST PIT NO.: 05-TP-54
PROJECT NO. CTO - 289 DATE: 6/26/97
LOCATION: Colts Neck, N.J.
FIELD GEOLOGIST: PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 4.5' x 10' long

PHOTO LOG Photo # 16

TEST PIT 05-TP-54

PAGE / OF /

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-55

PROJECT NO.: CTO - 289

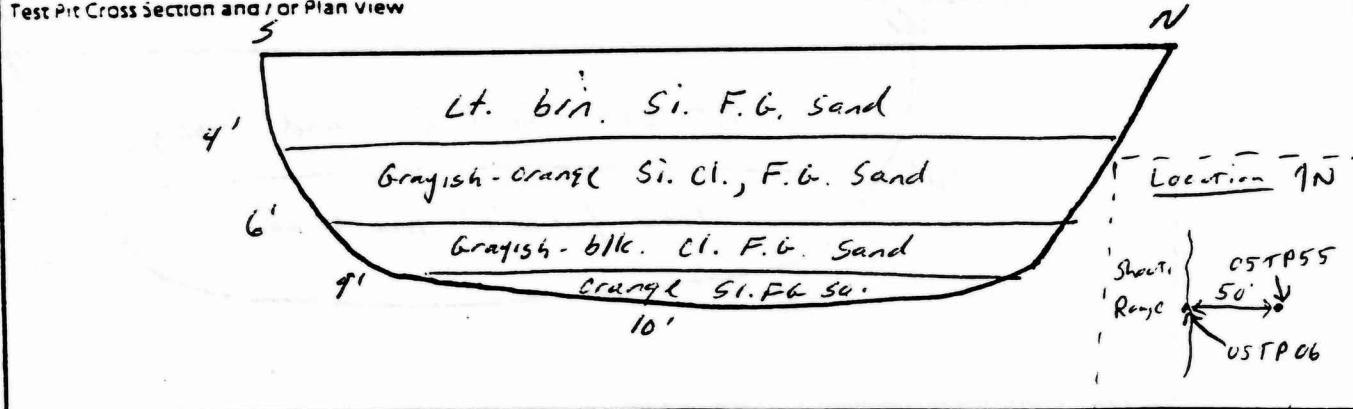
DATE: 6/26/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand (pebbly)		
4.0'				
4.0'		Grayish-orange silty clayey fine grained sand		
6.0'				
6.0'		Grayish-black clayey fine grained sand		
9.0'				
9.0'		Orange silty fine grained sand		
10'				

Test Pit Cross Section and / or Plan View



REMARKS 2' x 10' x 10' long - NO OBVIOUS trash/waste

PHOTO LOG

TEST PIT 05-TP-5

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS-EARL

PROJECT NO. CTO - 289

LOCATION: COLTS NECK, N.J.

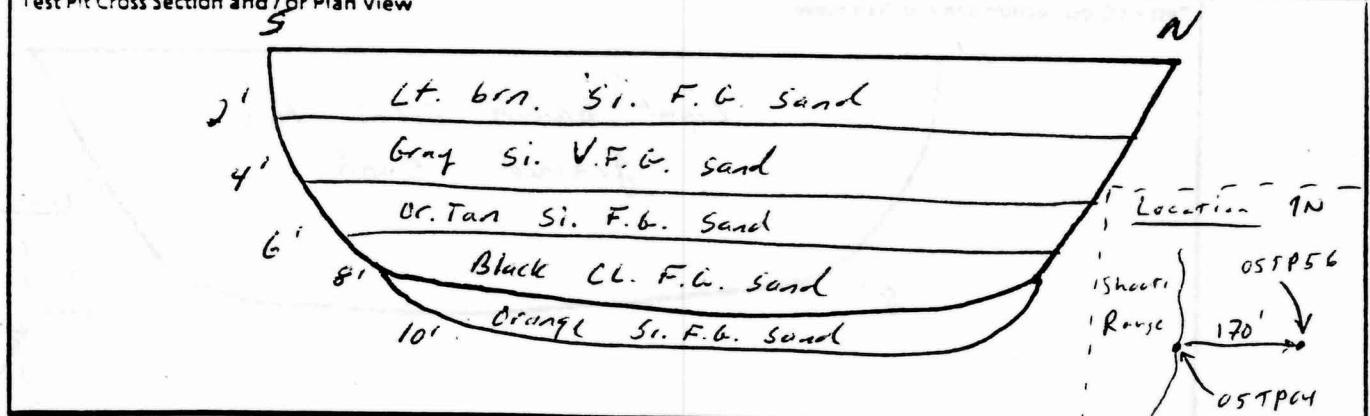
FIELD GEOLOGIST: PAUL M. DAVIS

TEST PIT NO.: 05-TP-56

DATE: 6/26/87

DEPTH (ft.)	LITHOLOGY CHANGE (DESCRIPT.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		Light brown silty fine grained sand		
2.0'		↓		
		Gray silty very fine grained sand		
4.0'		↓		
		orange-Tan silty fine grained sand		
6.0'		↓		
		Black clayey fine grained sand		
8.0'		↓		
		Orange silty fine grained sand		
10.0'		↓		

Test Pit Cross Section and/or Plan View



REMARKS 2' X 10' X 11'

-NO OBVIOUS TRASH/WASTE-

PHOTO LOG

TEST PIT 05-TP-56

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT. NWS-EARL

TEST PIT NO.: 05-TP-57

PROJECT NO. CTO - 289

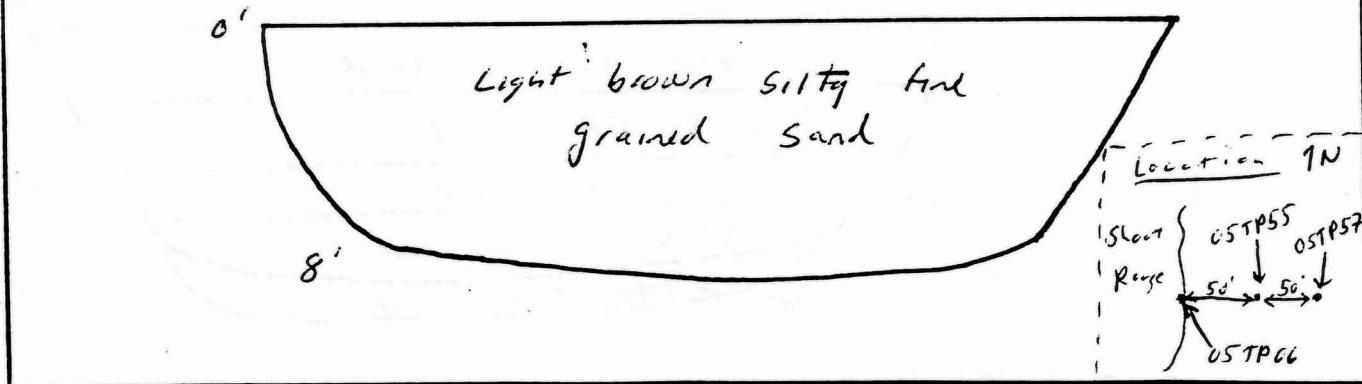
DATE: 6/26/97

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
0'		Light brown silty fine grained sand		
8'				

Test Pit Cross Section and / or Plan View



REMARKS 2' X 8' X 10' long

-NO Obvious waste/Trash-

PHOTO LOG

TEST PIT 05-TP-57

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

PROJECT NO. CTO - 289

DATE: 6/26/97

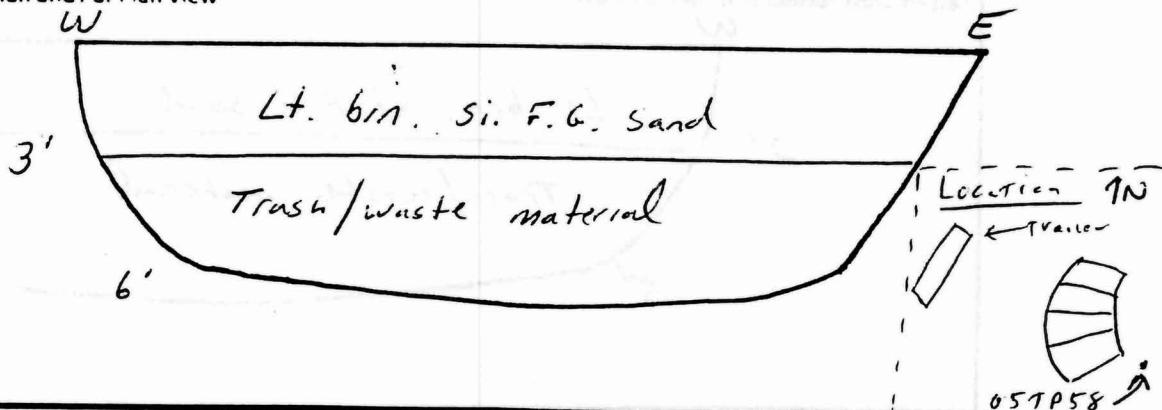
TEST PIT NO.: 05-TP-58

LOCATION: COLTS NECK, NJ.

FIELD GEOLOGIST: PAUL M. DAVIS

DEPTH (ft.)	LITHOLOGY CHANGE (Descript.)	MATERIAL DESCRIPTION	USCS	REMARKS
		(Soil Density / Consistency, Color)		
		light brown silty fine grained sand		
3'				
6'		Trash / waste material - lumber, paper, plastic, fabric, foam padding, alum. cans, metal straps		Strong Landfill odors

Test Pit Cross Section and / or Plan View



REMARKS 2' x 6' x 9' long

PHOTO LOG Photo # 21

TEST PIT 05-TP-58

PAGE 1 OF 1

TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS - EARL

TEST PIT NO.: 05-TP-59

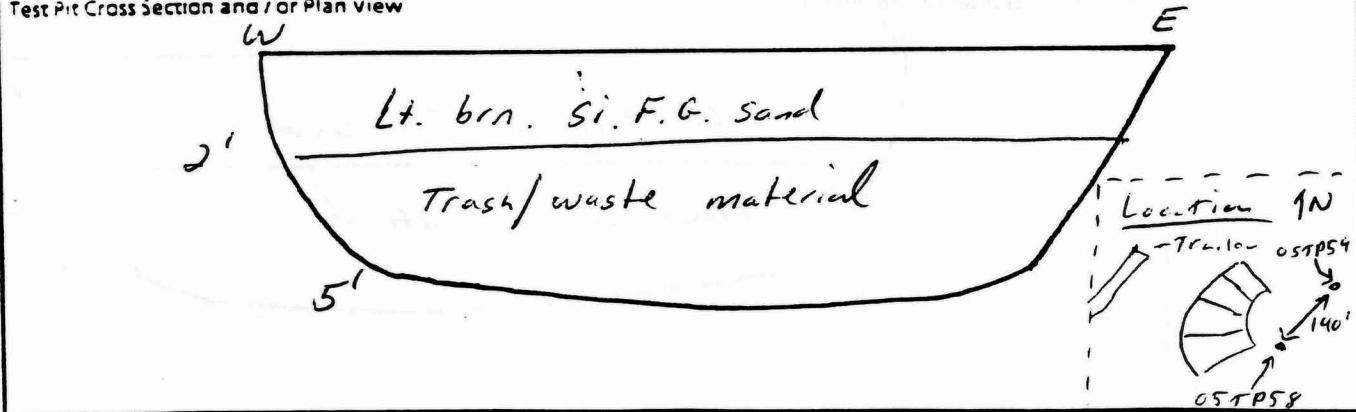
PROJECT NO. CTO - 289

DATE: 6/26/97

LOCATION: *Colts Neck, N.J.*

FIELD GEOLOGIST. PAUL M. DAVIS

Test Pit Cross Section and / or Plan View



REMARKS 2' x 5' x 7' long Center of Shooting Range.

PHOTO LOG photo # 22

TEST PIT 05-TP-59

PAGE 1 OF 1